KEYSTROKES

calculator activities for young students

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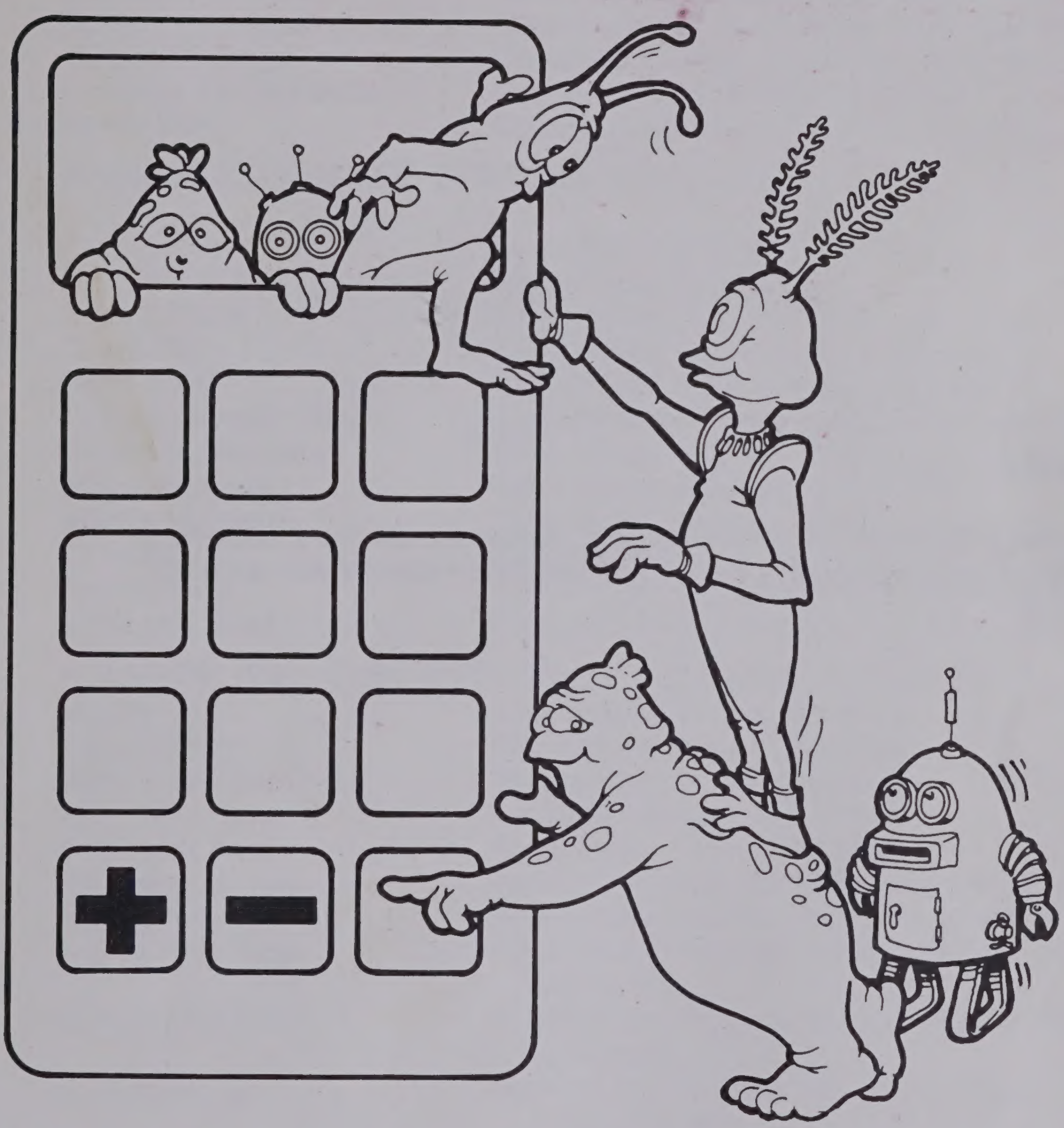
KEYSTROKES

calculator activities for young students

ADDITION and SUBTRACTION



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INTRODUCTION

The Keystrokes series provides a wide range of classroom-tested calculator activities for students in grades 2 through 6. The books in the series are:

Keystrokes—Addition and Subtraction
Keystrokes—Multiplication and Division

The focus of this book is on addition and subtraction. Included are activities in counting, basic facts, patterns, problem solving, estimation, and application through word problems. At the top of each page you will see a listing of skills, ordered by emphasis, with the first skill giving the main focus of the activity. In addition, many pages include teaching suggestions for implementing the various activities. All these materials have been developed for and used with a variety of textbook series and can be easily integrated into any current mathematics program.

Keystrokes has been developed for use with a four-function calculator with algebraic logic and an eight-digit display. Many of the activities, however, are suitable for use with any calculator. The table below indicates the pages in this book involving activities that require specific calculator capabilities. A quick check of your calculator's capabilities will alert you to activities that may require further instruction.

Capability: Tallying

Pages 1 through 7

Key	Display shows
Enter ⑦	7
Enter ⊕	7
Enter ①	1
Enter ⊜	8
Enter ⊜	9
Enter ⊜	10

Capability: Addition Constant

Page 56

Key	Display shows
Enter ⊕	0
Enter ④	4
Enter ⊜	4
Enter ⑦	7
Enter ⊜	11

Pages 11 and 17

Key	Display shows
Enter ⑤	5
Enter ⊕	5
Enter ⊜	5
Enter ⑥	6
Enter ⊜	11

Page 57

Key	Display shows
Enter ⑤	5
Enter ⊕	5
Enter ⑦	7
Enter ⊜	12
Enter ③	3
Enter ⊜	10

Capability: Subtraction Constant

Page 61

Key	Display shows
Enter ⊖	0
Enter ③	3
Enter ⊜	−3
Enter ⑦	7
Enter ⊜	4

Pages 12, 18, and 19

Key	Display shows
Enter ⑤	5
Enter ⊖	5
Enter ⊜	5
Enter ⑥	6
Enter ⊜	1

Page 62

Key	Display shows
Enter ⑦	7
Enter ⊖	7
Enter ④	4
Enter ⊜	3
Enter ⑧	8
Enter ⊜	4

Some calculators may not show the exact displays illustrated above. Slight discrepancies should be considered before using the related activities in the classroom.

Getting Started

If your students have never used a calculator before, you may wish to work through the First-Day Activities with them. Experience has shown that these warm-up activities provide crucial instruction and motivation for the student who is unfamiliar with the calculator.

A one to one correspondence between students and calculators is ideal. Many calculator activities, however, can be effectively used by two students sharing one calculator.

Boxes that are similar to those in which vinegar and cooking oil are shipped provide excellent storage for calculators. These boxes can often be obtained from grocery stores or supermarkets.

Remind students to turn off the calculators that are not being used. Assign to one of your students the responsibility of checking the storage box after each lesson to see that all of the calculators are turned off.

If the calculators are to remain in your classroom all year, you will find it helpful to have the students tape their names on the calculators. This will help promote a sense of responsibility.

First-Day Activities

On, Off, and Clear Keys

Be sure all students know where these keys are and how they are used. The Ⓒ key is not included in any of the keying instructions in this book. Students should understand that, unless they are instructed otherwise, Ⓒ must be pressed after each calculation.

Free Time
Let your students experiment with the calculator. Allow three to five minutes for them to explore its capabilities on their own. At the end of this time, most students will be eager for guidance.

Entering Equations
Instruct your students to solve the following equations on their calculators. You may wish to show the keying sequences on the chalkboard.

2 + 3 =	②⊕③⊜
12 − 7 =	①②⊖⑦⊜
5 × 11 =	⑤⊗①①⊜
18 ÷ 9 =	①⑧⨸⑨⊜
4 + 5 + 8 + 10 =	④⊕⑤⊕⑧⊕①⓪⊜

Constant Addend Feature
This feature enables students to skip count. If the calculators that you are using have a constant addend feature, the following exercises will provide additional motivation for your students.

- Enter ①⊕①⊜⊜⊜ . . .

Read each number aloud as it is displayed. Have the students race to 100, stopping exactly at 100.

Based on the time it takes to race to 100, have the students guess how long it would take to race to 200. To 1000.

- Enter ⓪⊕②⊜⊜⊜ . . .

This keying sequence will enable students to count by twos. Have them count to 100, predicting each number before it is displayed.

Use this same keying procedure to count to 100 by fives, and then by tens.

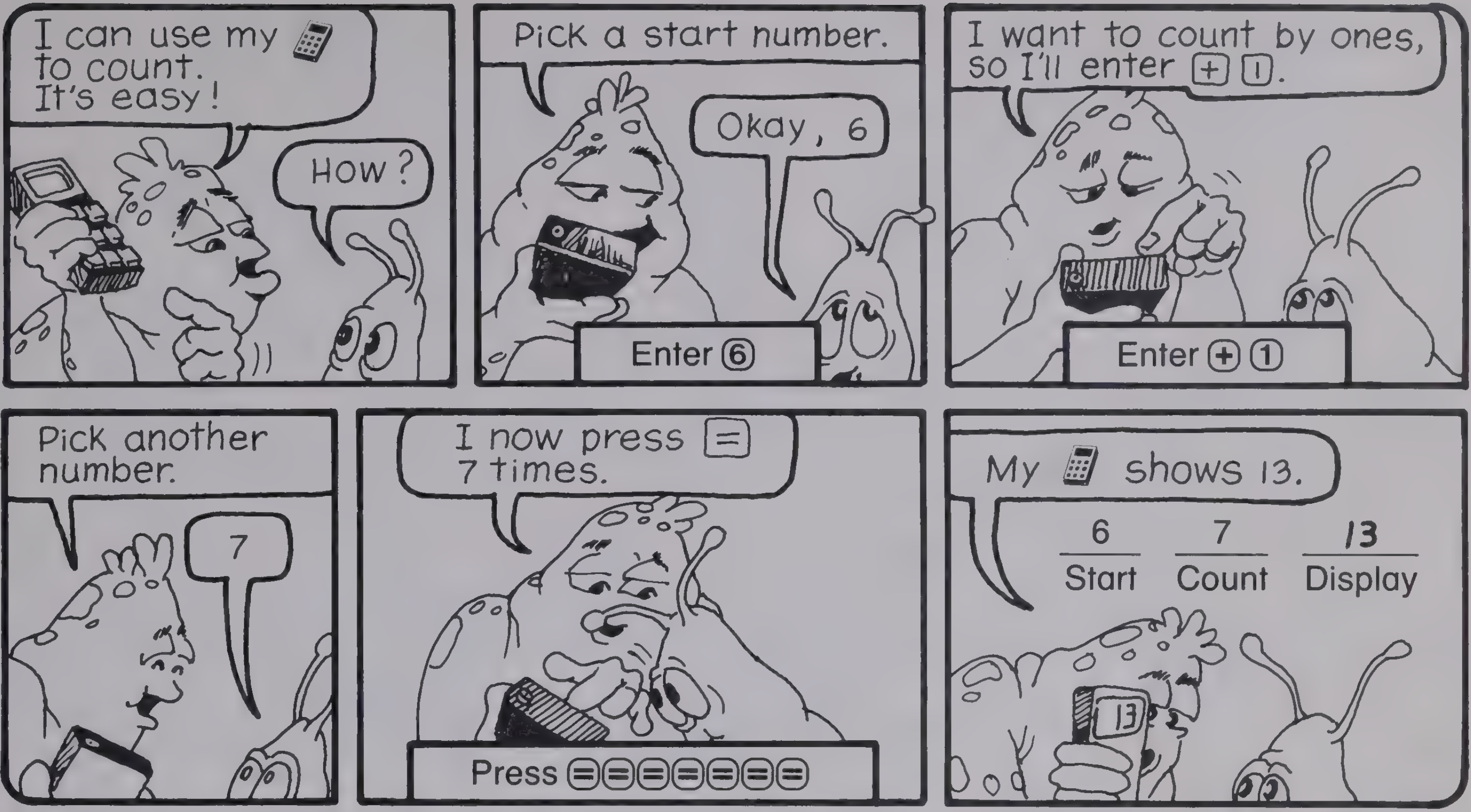
- Have your students count backwards. For example:

Enter ①⓪⓪⊖①⊜⊜⊜ . . . or Enter ①⓪⓪⊖②⊜⊜⊜ . . .

Highest Number
Ask your students to find the highest number their calculators will display. Have them add one to this number. Many calculators will flash when overloaded, others will display E's across the display. Students should recognize the overload signal and understand its importance.

Start and Count

Name ✓



Start
5

Enter ⑤

Count	
4	Count on 4 times.

Enter ⊕①

Press ⊜⊜⊜⊜

Your 🖩 should show 9 Display

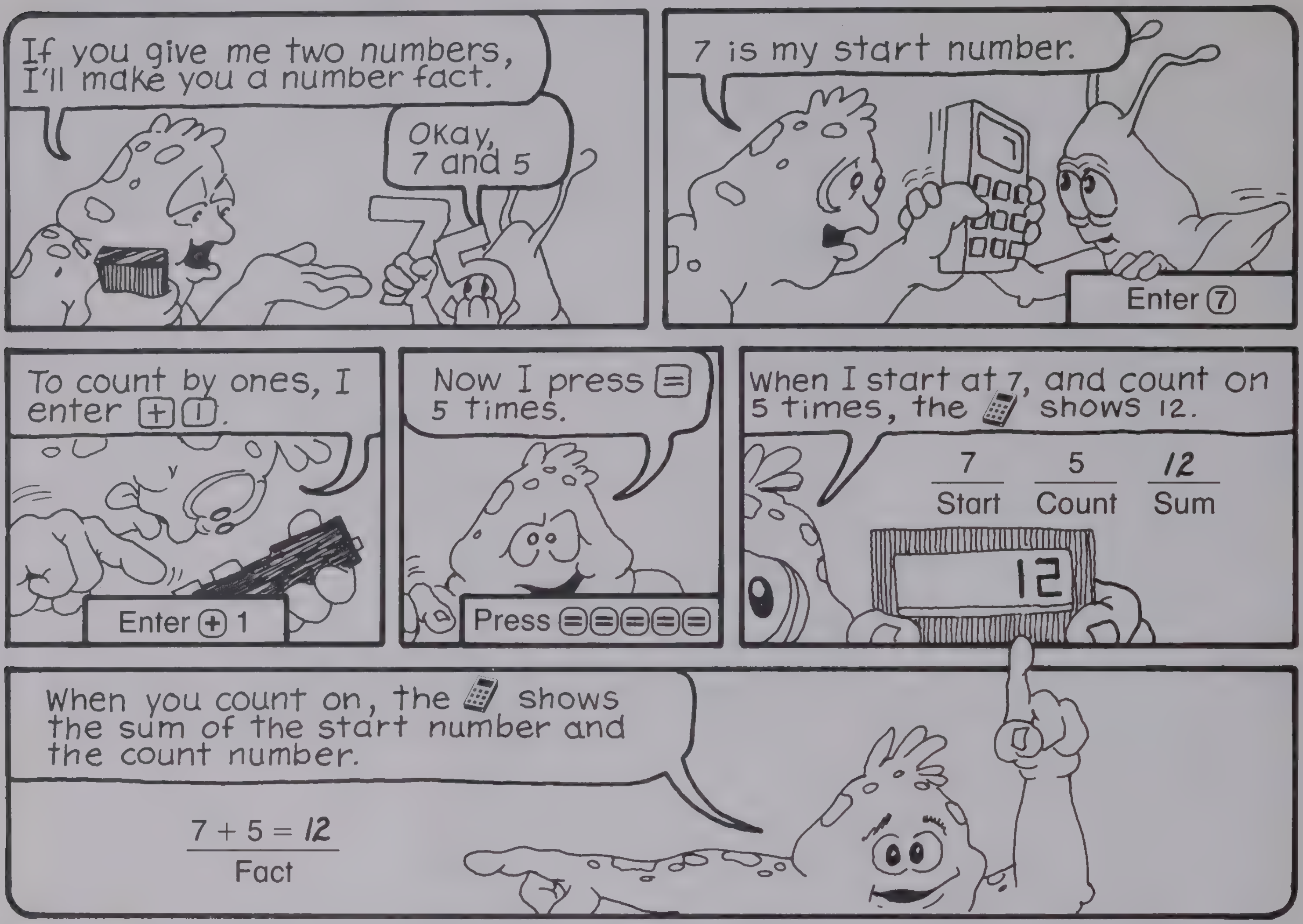
Start	Count	Display
5	4	9

Try these.

	Start	Count	Display
1.	4	7	
2.	9	6	
3.	1	9	
4.	12	5	
5.	22	5	
6.	3	9	
7.	4	8	
8.	5	7	
9.	7	3	
10.	17	3	

Counting On

Name ______________________


If you give me two numbers, I'll make you a number fact.
Okay, 7 and 5
7 is my start number.
Enter ⑦
To count by ones, I enter ⊞①.
Enter ⊕ 1
Now I press ⊜ 5 times.
Press ⊜⊜⊜⊜⊜
When I start at 7, and count on 5 times, the 🖩 shows 12.
7 Start
5 Count
12 Sum
12
When you count on, the 🖩 shows the sum of the start number and the count number.
7 + 5 = 12
Fact

Try these.

1. 5 3 8
Start Count Sum

5 + 3 = 8
Fact

2. 29 3 ___
Start Count Sum

29 + 3 = ___
Fact

3. 9 6 ___
Start Count Sum

9 + 6 = ___
Fact

4. 58 5 ___
Start Count Sum

58 + 5 = ___
Fact

5. 17 4 ___
Start Count Sum

17 + 4 = ___
Fact

6. 27 4 ___
Start Count Sum

27 + 4 = ___
Fact

7. 47 4 ___
Start Count Sum

47 + 4 = ___
Fact

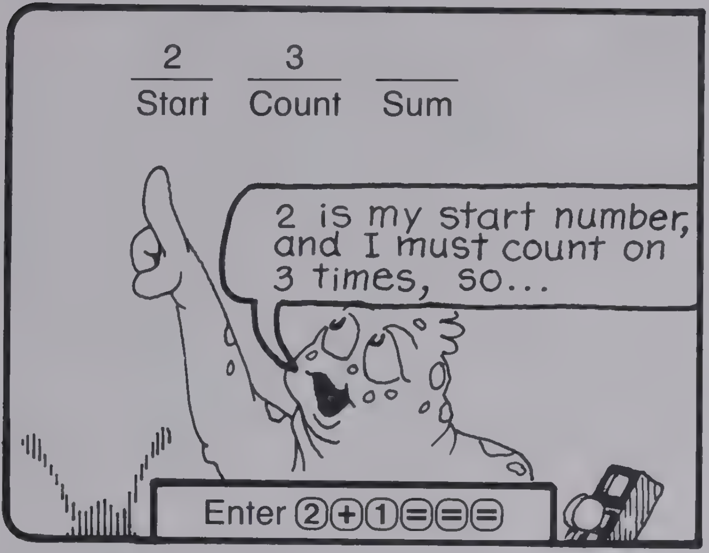
8. 97 4 ___
Start Count Sum

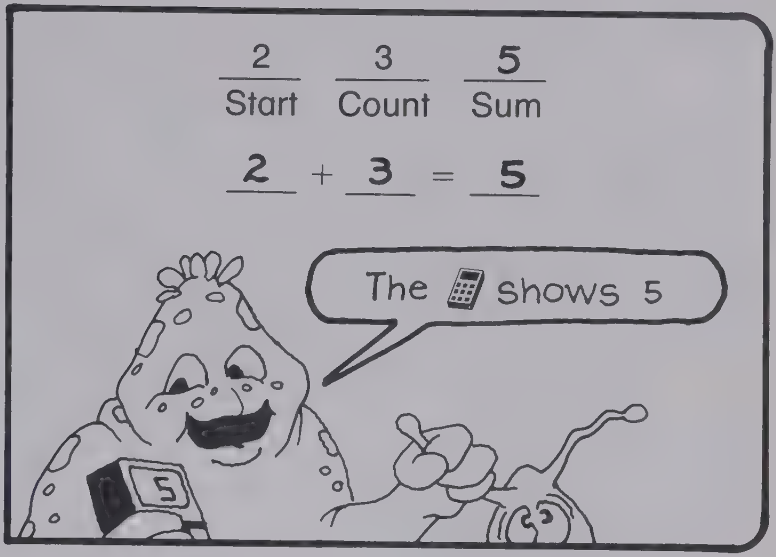
97 + 4 = ___
Fact

Addition Count

Name ____________________

Let's do some more counting!


2 Start
3 Count
___ Sum
2 is my start number, and I must count on 3 times, so...
Enter ②⊕①⊜⊜⊜



Find each sum below. Then write the fact that goes with each sum.

1. 4 Start 2 Count ___ Sum
   ___ + ___ = ___

2. 5 Start 3 Count ___ Sum
   ___ + ___ = ___

3. 7 Start 2 Count ___ Sum
   ___ + ___ = ___

4. 8 Start 3 Count ___ Sum
   ___ + ___ = ___

5. 3 Start 8 Count ___ Sum
   ___ + ___ = ___

6. Start 6
   Count 3
   Sum ___

   ___
   + ___
   ___

7. Start 7
   Count 4
   Sum ___

   ___
   + ___
   ___

8. Start 6
   Count 5
   Sum ___

   ___
   + ___
   ___

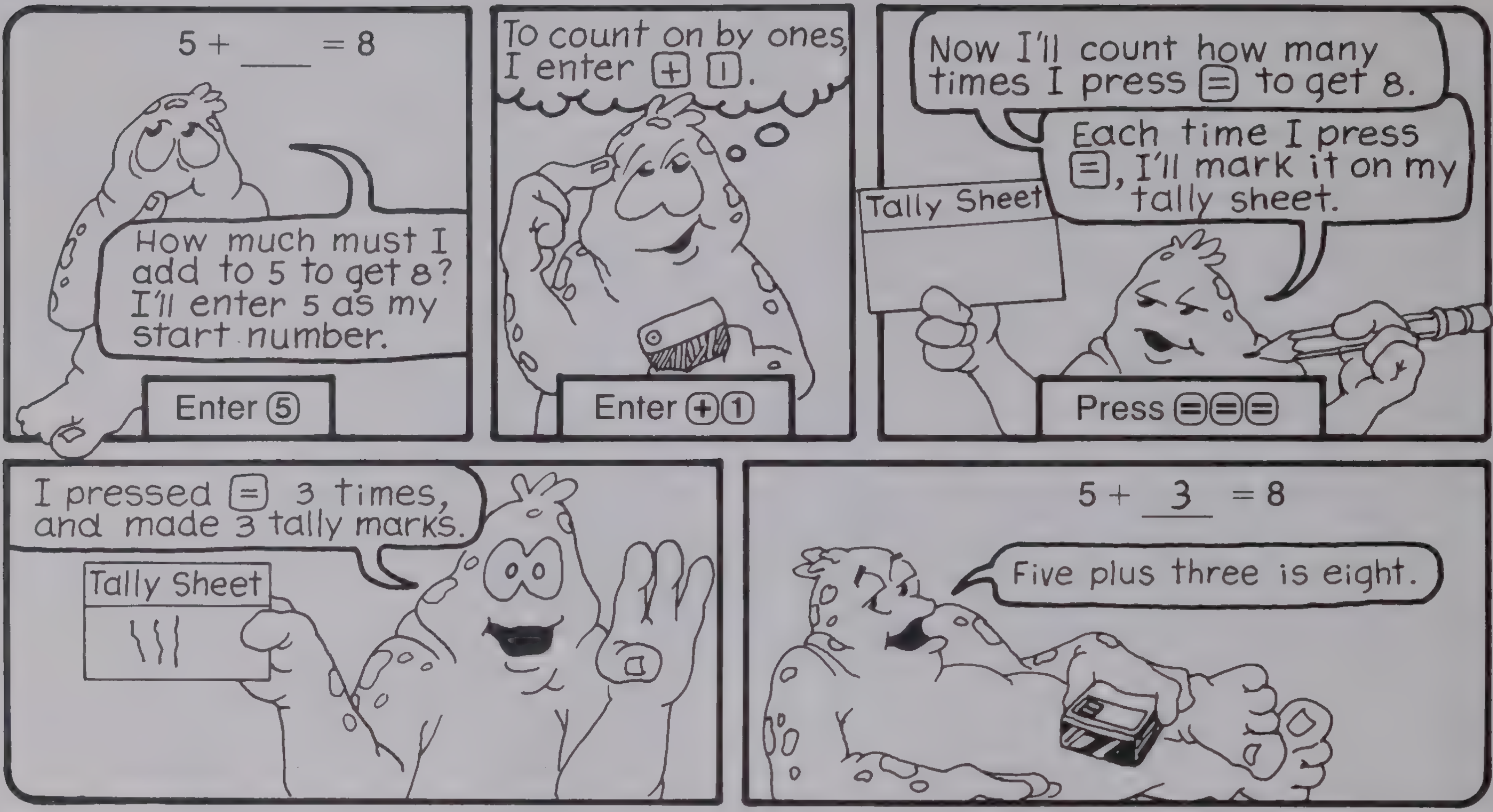
9. 18 Start 2 Count ___ Sum
   ___ + ___ = ___

10. 98 Start 2 Count ___ Sum
    ___ + ___ = ___

Counting On
Addition
Missing Addend
Tallying

Name-a-Number

Name ____________________


5 + ___ = 8
How much must I add to 5 to get 8? I'll enter 5 as my start number.
Enter ⑤
To count on by ones, I enter ⊞ ⓵.
Enter ⊕①
Now I'll count how many times I press ⊜ to get 8.
Each time I press ⊜, I'll mark it on my tally sheet.
Tally Sheet
Press ⊜⊜⊜
I pressed ⊜ 3 times, and made 3 tally marks.
Tally Sheet
\|\|\|
5 + 3 = 8
Five plus three is eight.

Try these.

Enter 2⊕①⊜⊜⊜⊜

1. 2 + ___ = 6

Tally Sheet

2. 5 + ___ = 11

Tally Sheet

3. 4 + ___ = 9

Tally Sheet

4. 2 + ___ = 9

Tally Sheet

5. 4
+ ___
7

Tally Sheet

6. 7
+ ___
12

Tally Sheet

7. 8 + ___ = 10

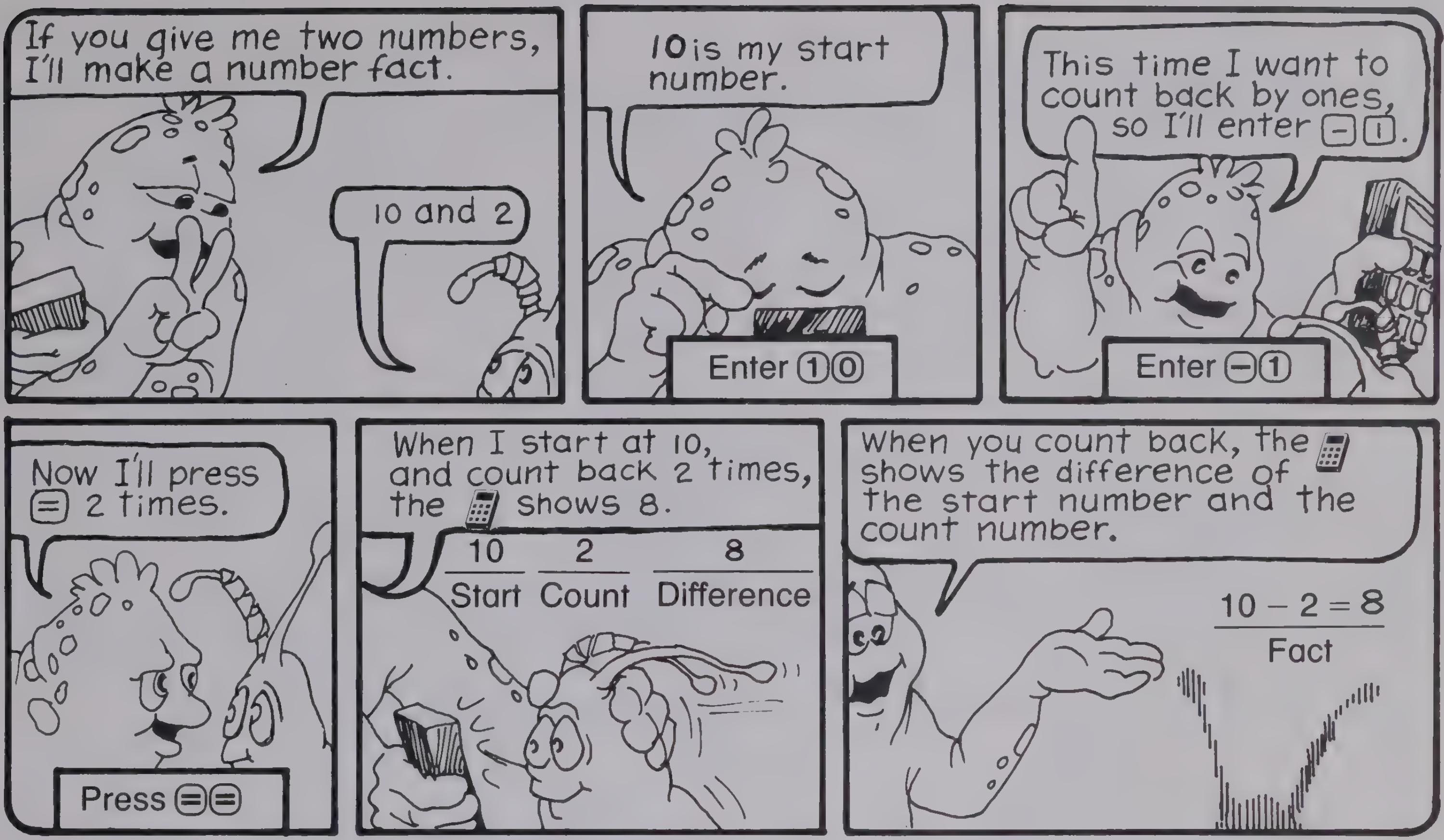
Tally Sheet

8. 18 + ___ = 20

Tally Sheet

Counting Back

Name ______________________


If you give me two numbers, I'll make a number fact.
10 and 2
10 is my start number.
Enter ①⓪
This time I want to count back by ones, so I'll enter ⊖①.
Enter ⊖①
Now I'll press ⊜ 2 times.
Press ⊜⊜
When I start at 10, and count back 2 times, the 🖩 shows 8.
10 Start
2 Count
8 Difference
When you count back, the 🖩 shows the difference of the start number and the count number.
10 − 2 = 8
Fact

Try these.

1. 15 Start 7 Count 8 Difference

15 − 7 = 8 Fact

2. 13 Start 7 Count ____ Difference

13 − 7 = ____ Fact

3. 17 Start 9 Count ____ Difference

17 − 9 = ____ Fact

4. 14 Start 7 Count ____ Difference

14 − 7 = ____ Fact

5. 24 Start 5 Count ____ Difference

24 − 5 = ____ Fact

6. 34 Start 5 Count ____ Difference

34 − 5 = ____ Fact

7. 54 Start 5 Count ____ Difference

54 − 5 = ____ Fact

8. 104 Start 5 Count ____ Difference

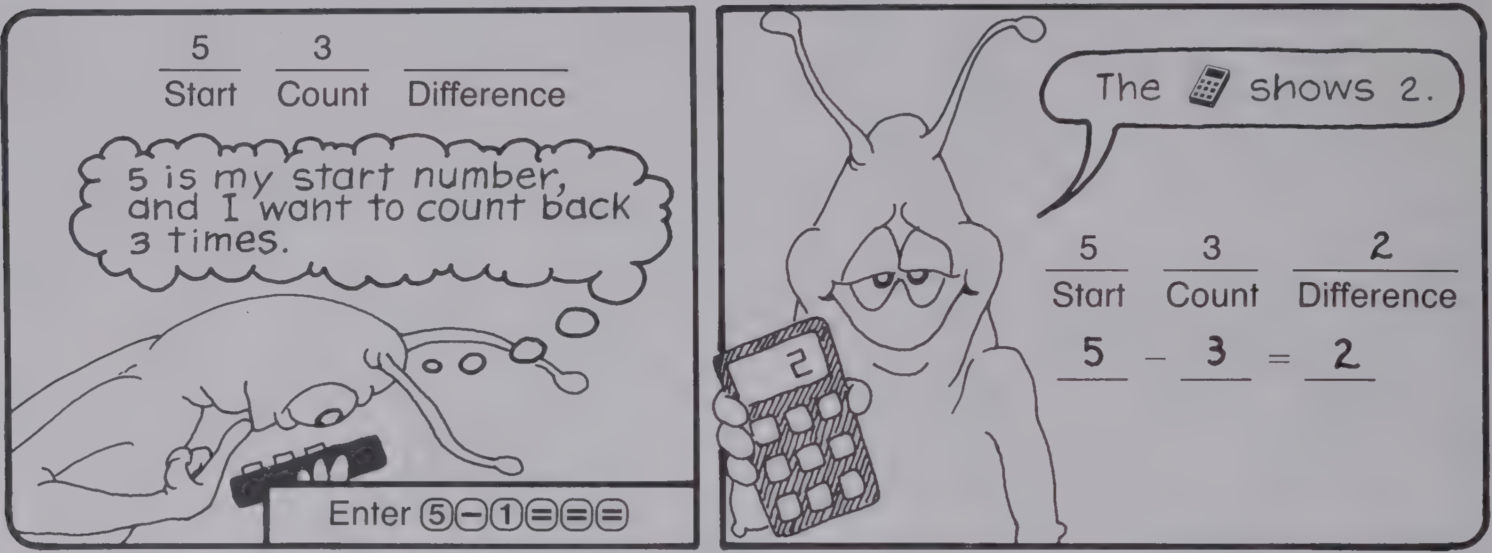
104 − 5 = ____ Fact

Counting Back
Basic Facts
Subtraction

Subtraction Count

Name ______________________

Let's do some more counting back.



Find each difference below. Then write the fact that goes with each difference.

1. 7 Start 4 Count ___ Difference
___ − ___ = ___

2. 9 Start 2 Count ___ Difference
___ − ___ = ___

3. 6 Start 5 Count ___ Difference
___ − ___ = ___

4. 10 Start 6 Count ___ Difference
___ − ___ = ___

5. 15 Start 7 Count ___ Difference
___ − ___ = ___

6. Start 4 ___
Count 4 − ___
Difference ___ ___

7. Start 13 ___
Count 4 − ___
Difference ___ ___

8. Start 12 ___
Count 5 − ___
Difference ___ ___

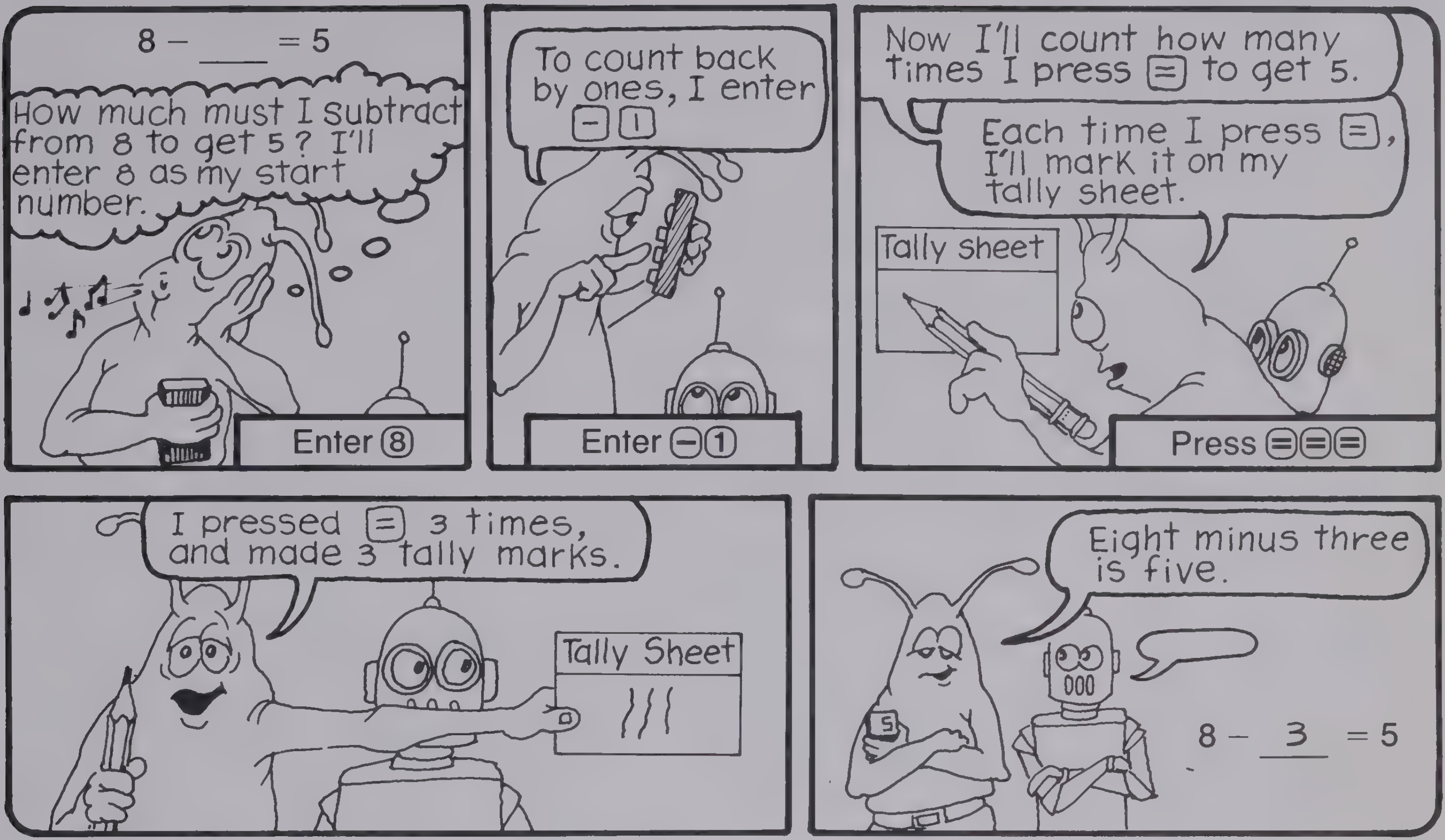
9. Start 27 ___
Count 3 − ___
Difference ___ ___

10. Start 57 ___
Count 3 − ___
Difference ___ ___

Counting Back
Subtraction
Missing Parts
Tallying

Something's Missing

Name ________________________


8 − ___ = 5
How much must I subtract from 8 to get 5? I'll enter 8 as my start number.
Enter ⑧
To count back by ones, I enter ⊖①
Enter ⊖①
Now I'll count how many times I press ⊜ to get 5.
Each time I press ⊜, I'll mark it on my tally sheet.
Tally sheet
Press ⊜⊜⊜
I pressed ⊜ 3 times, and made 3 tally marks.
Tally Sheet
///
Eight minus three is five.
5
8 − 3 = 5

Try these.

Enter ①⓪⊖①⊜⊜⊜⊜

1. 10 − ____ = 6

Tally Sheet

2. 14 − ____ = 8

Tally Sheet

3. 7 − ____ = 6

Tally Sheet

4. 15 − ____ = 6

Tally Sheet

5. 11
− ___
5

Tally Sheet

6. 21
− ___
15

Tally Sheet

7. 7 − ____ = 2

Tally Sheet

8. 17 − ____ = 12

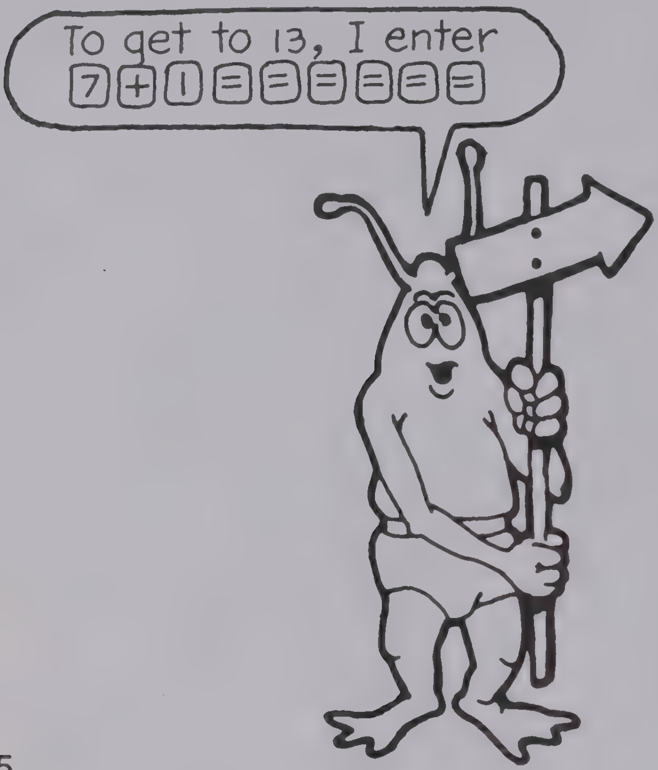
Tally Sheet

Counting
Addition and Subtraction
Missing Parts

What's Missing?

Name ____________________

Use your 🖩 to find the missing numbers by counting on or counting back.


To get to 13, I enter
7 + 1 = = = = = =

1. 7 + ____ = 13

2. ____ + 11 = 17

3. 21 + ____ = 27

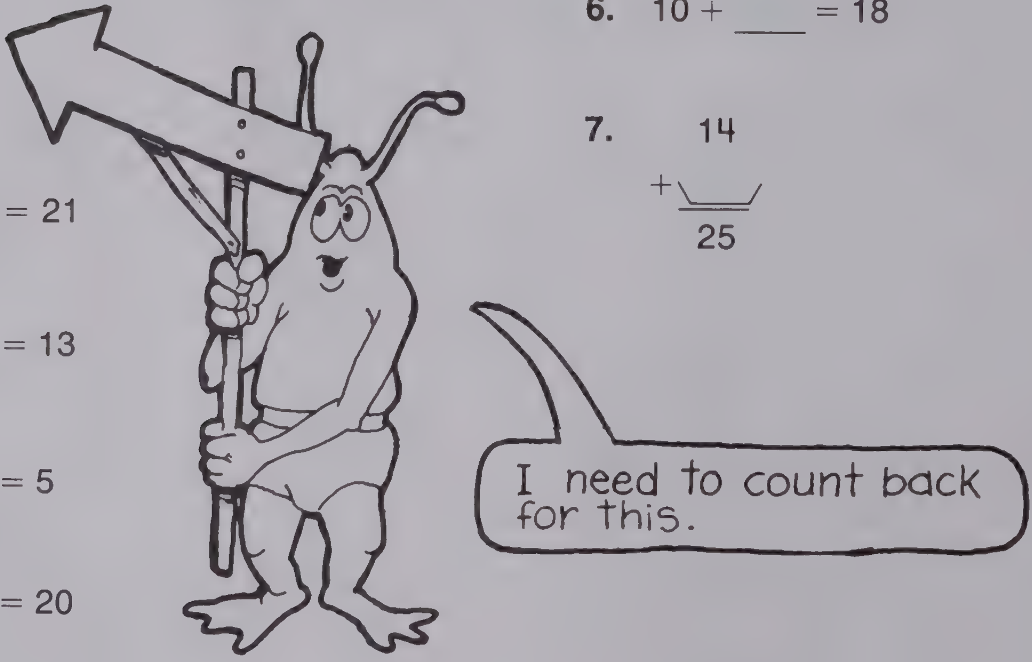
4. 13 + ____ = 16

5. ____ + 7 = 15

6. 10 + ____ = 18

7.
14
+ ____/
25

8.
25
− ____/
16


I need to count back for this.

9. 27 − ____ = 21

10. 20 − ____ = 13

11. 10 − ____ = 5

12. 23 − ____ = 20

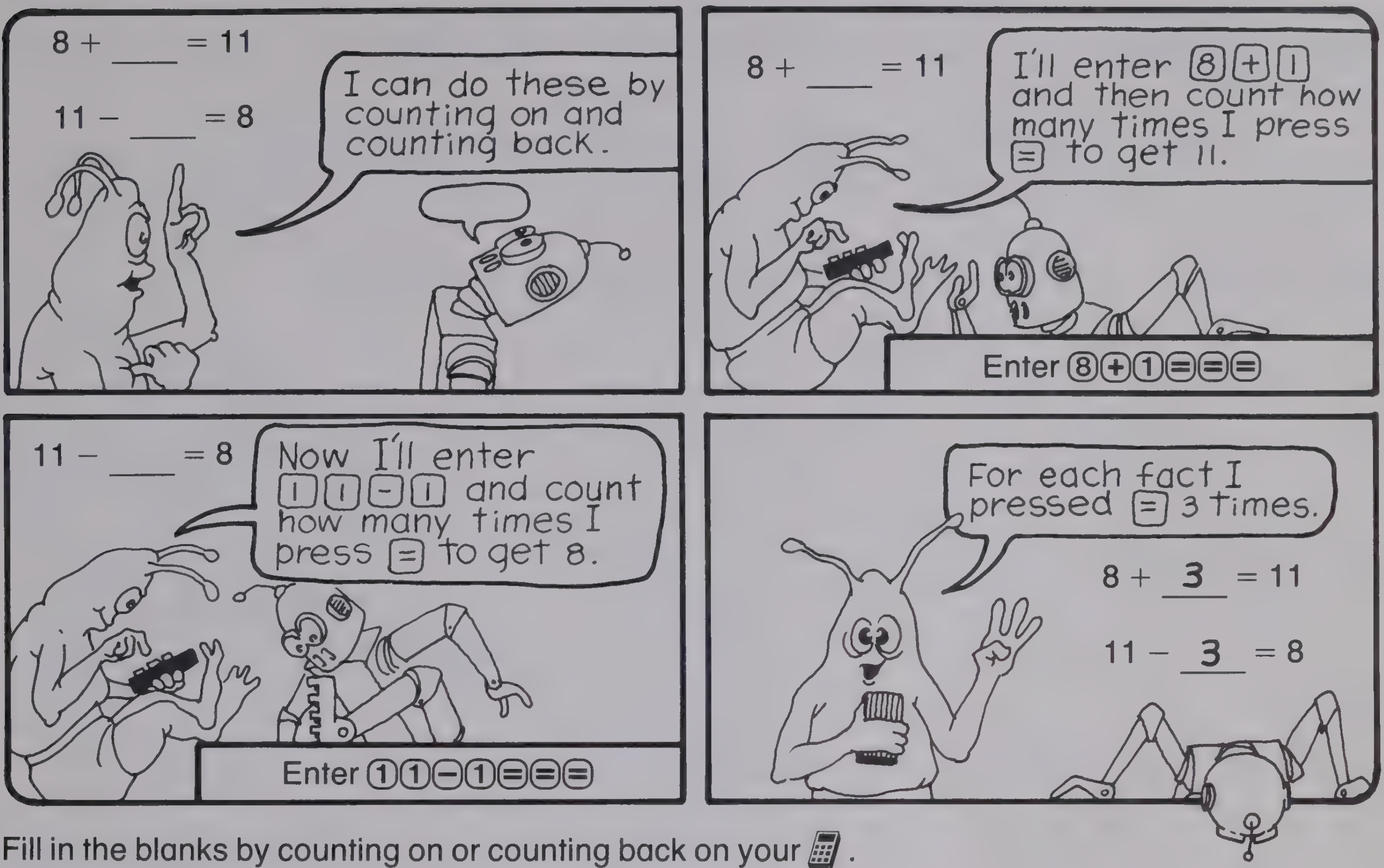
13. 6 − ____ = $^{-}2$

14. 4 − ____ = $^{-}1$

Counting
Related Facts
Patterns

Counting On and Back

Name ____________________


8 + ____ = 11
11 − ____ = 8
I can do these by counting on and counting back.
8 + ____ = 11
I'll enter 8 + 1 and then count how many times I press = to get 11.
Enter ⑧⊕①⊜⊜⊜
11 − ____ = 8
Now I'll enter 1 1 − 1 and count how many times I press = to get 8.
Enter ①①⊖①⊜⊜⊜
For each fact I pressed = 3 times.
8 + 3 = 11
11 − 3 = 8

Fill in the blanks by counting on or counting back on your 🖩.

1. 9 + ____ = 14
14 − ____ = 5

2. 8 + ____ = 12
12 − ____ = 8

3. ____ + 7 = 11
11 − ____ = 7

4. 8 + ____ = 17
17 − ____ = 9

5. 15 − 7 = ____
7 + ____ = 15

6. 7 + ____ = 12
12 − ____ = 5

7. ____ + 4 = 14
14 − 4 = ____

8. 9 + ____ = 17
17 − ____ = 8

Counting
Subtraction
Negative Numbers

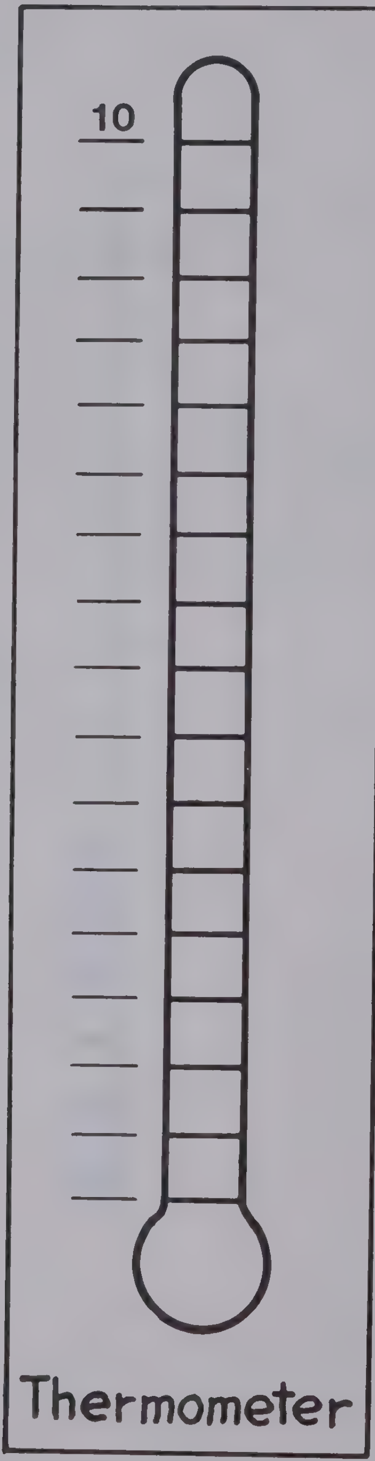
Below Zero

Name ____________________

Fill in the blanks on the thermometer by counting back from 10. Enter ①⓪⊖①⊜. Each time you press ⊜, write the display number on the thermometer.

Put your finger on the thermometer at 4. Count down 9 spaces. What number do you stop on? ____ On your 🖩, enter ④⊖⑨⊜. What number appears? ____

Use your 🖩 to solve each equation below. Then use your thermometer.



1. 9 − 5 = ____

Enter ⑨⊖⑤⊜

Start at 9.

Count down 5.

Stop at ____ .

2. 9 − 13 = ____ .

Start at 9.

Count down 13.

Stop at ____ .

3. 5 − 4 = ____

Start at 5.

Count down ____ .

Stop at ____ .

4. 4 − 5 = ____

Start at 4.

Count down ____ .

Stop at ____ .

5. 0 − 6 = ____

Start at ____ .

Count down ____ .

Stop at ____ .

6. 7 − 12 = ____ .

Start at ____ .

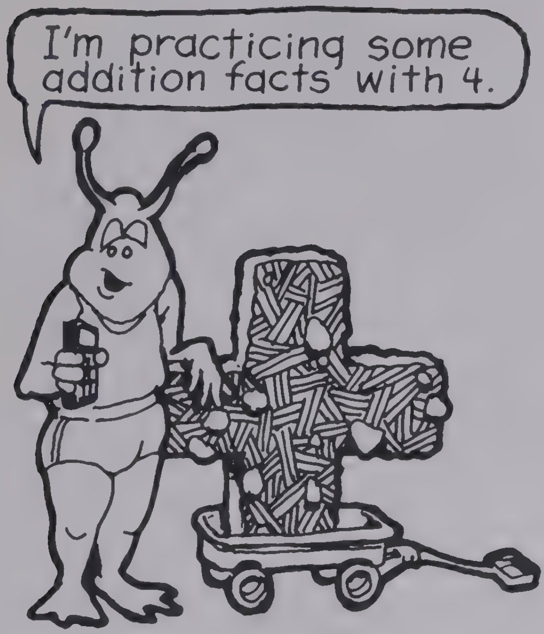
Count down ____ .

Stop at ____ .

Fact Check

Name ____________________

7 + 4 = 11
2 + 4 = 6
8 + 4 =


I'm practicing some addition facts with 4.

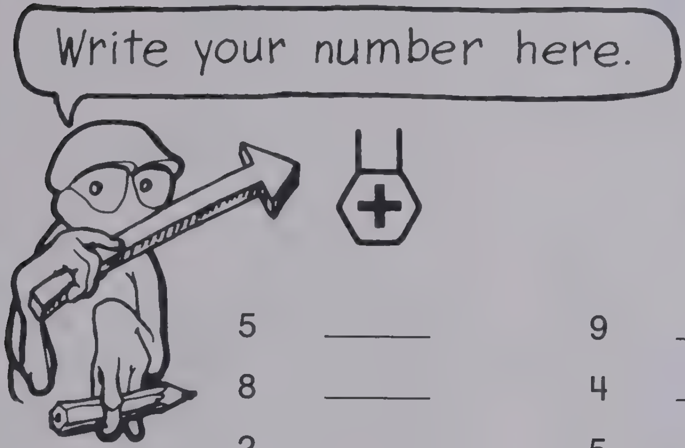
Here's a quick way to use your 🖩 to check your answers.

- Enter ④⊕⊜. The 4 is now locked in your 🖩. Any number you enter will be added to 4.
- Enter ⑦
- Give your answer. Say, "Seven plus four equals eleven."
- Press ⊜. If your answer matches the answer on the 🖩, mark an O.K. beside 7.
- Enter ②
- Give your answer.   (2 + 4 = ?)
- Press ⊜ to check your answer.
- Mark an O.K. if your answer is right, and an X if it is wrong.

4 ⊕

7 O.K.
2 O.K.
8 ______

Try these. Choose the number that you want to check and write it in the space provided.


Write your number here.

⊕

5 ______
8 ______
2 ______
4 ______
6 ______
9 ______
0 ______
7 ______
1 ______
3 ______

⊕

9 ______
4 ______
5 ______
7 ______
6 ______
8 ______
9 ______
8 ______
6 ______
7 ______

⊕

2 ______
4 ______
1 ______
0 ______
5 ______
3 ______
2 ______
4 ______
0 ______
3 ______

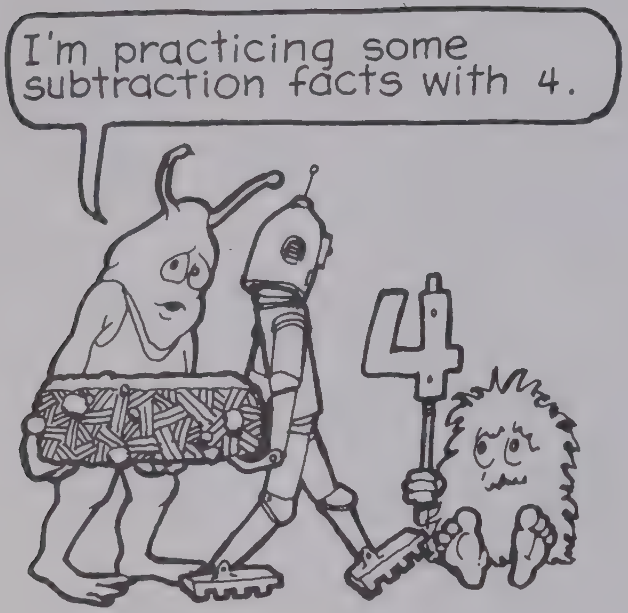
⊕

6 ______
2 ______
9 ______
1 ______
4 ______
8 ______
5 ______
3 ______
0 ______
7 ______

Fact Check Too!

Name ____________________

11 − 4 = 7
12 − 4 = 8
6 − 4 =


I'm practicing some subtraction facts with 4.
4

Here's a quick way to use your 🖩 to check your answers.

- Enter ④⊖⊜. The 4 is now locked in your 🖩. 4 will be subtracted from any number you enter.
- Enter ①①
- Give your answer. Say, "Eleven minus four equals seven."
- Press ⊜. If your answer matches the answer on the 🖩, mark an O.K. beside 11.
- Enter ①②
- Give your answer. (12 − 4 = ?)
- Press ⊜ to check your answer.
- Mark an O.K. if your answer is right, and an X if it is wrong.

4 ⊖

11 O.K.
12 O.K.
6 ______

Try these.

For this first fact check, enter ⑤⊖⊜. Now you're ready to practice subtraction facts with 5.

	5 ⊖		7 ⊖		6 ⊖		2 ⊖
13	______	14	______	6	______	11	______
10	______	16	______	12	______	9	______
14	______	7	______	15	______	10	______
8	______	8	______	13	______	8	______
6	______	11	______	7	______	6	______
5	______	9	______	12	______	5	______
11	______	10	______	9	______	7	______
12	______	15	______	10	______	4	______
7	______	12	______	11	______	3	______
9	______	13	______	14	______	2	______

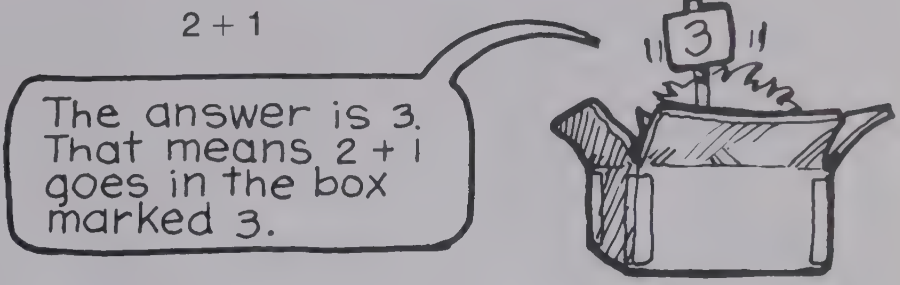
Basic Facts
Related Facts

Sorting Facts

Name ______________________

Use your 🖩 to find the sums and differences below. Then place each equation in the box marked with its answer.

2 + 1


3
The answer is 3. That means 2 + 1 goes in the box marked 3.

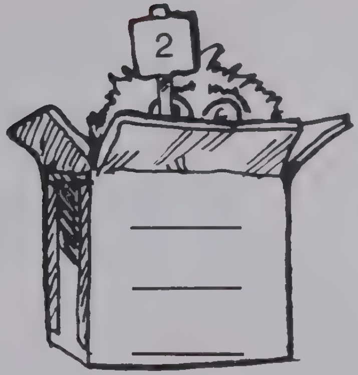
2 + 1
9 − 3
3 + 3
8 − 3
8 − 6

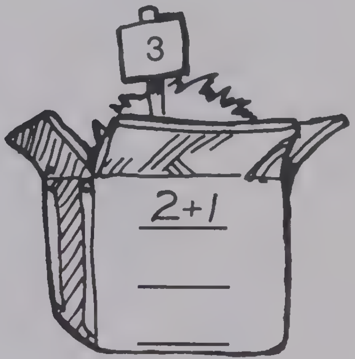
7 − 3
1 + 4
7 − 0
6 − 5
7 + 3

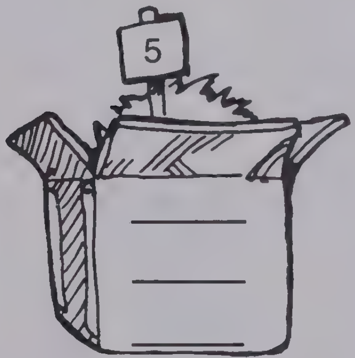
3 + 6
7 − 5
8 − 7
0 + 10
2 + 3

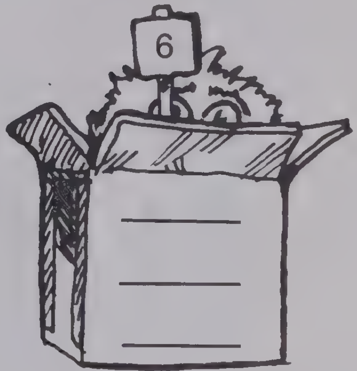
9 − 1
1 + 0
5 + 3
4 + 2
9 − 2

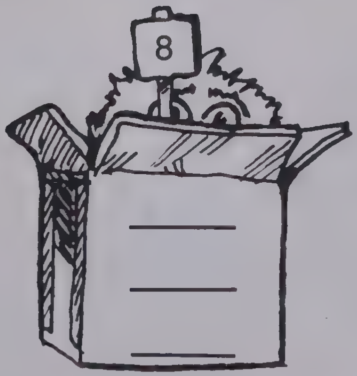
5 + 5
3 + 4
10 − 1
2 + 2
5 + 4

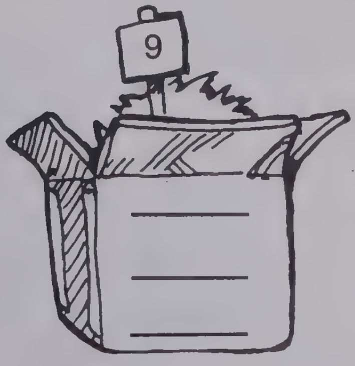


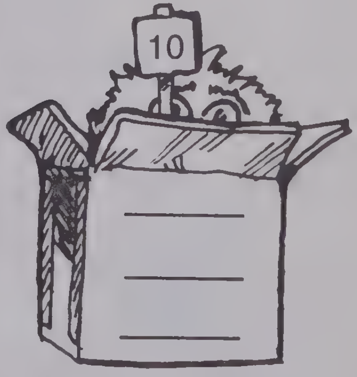






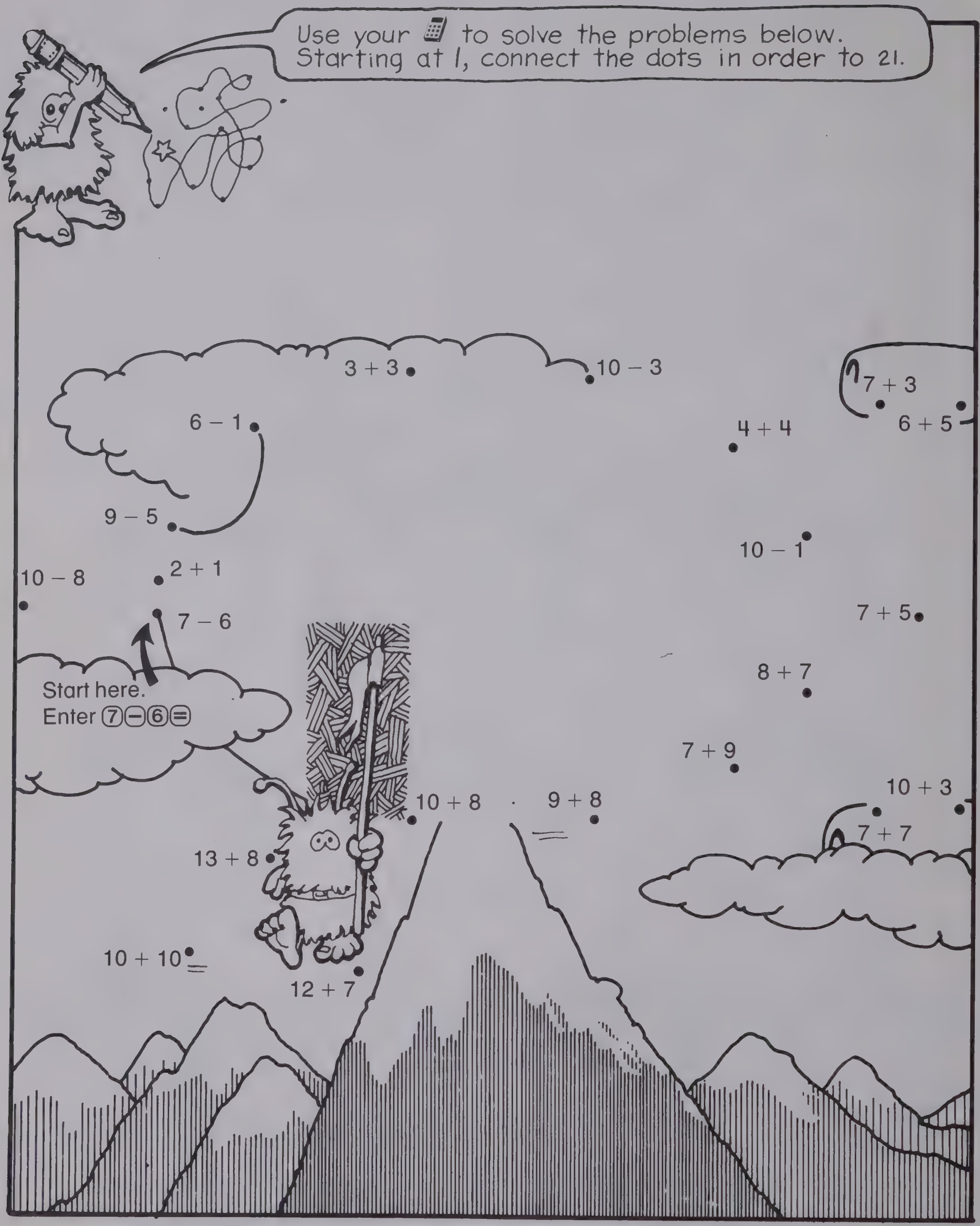






Dot to Dot

Name ____________ ✓

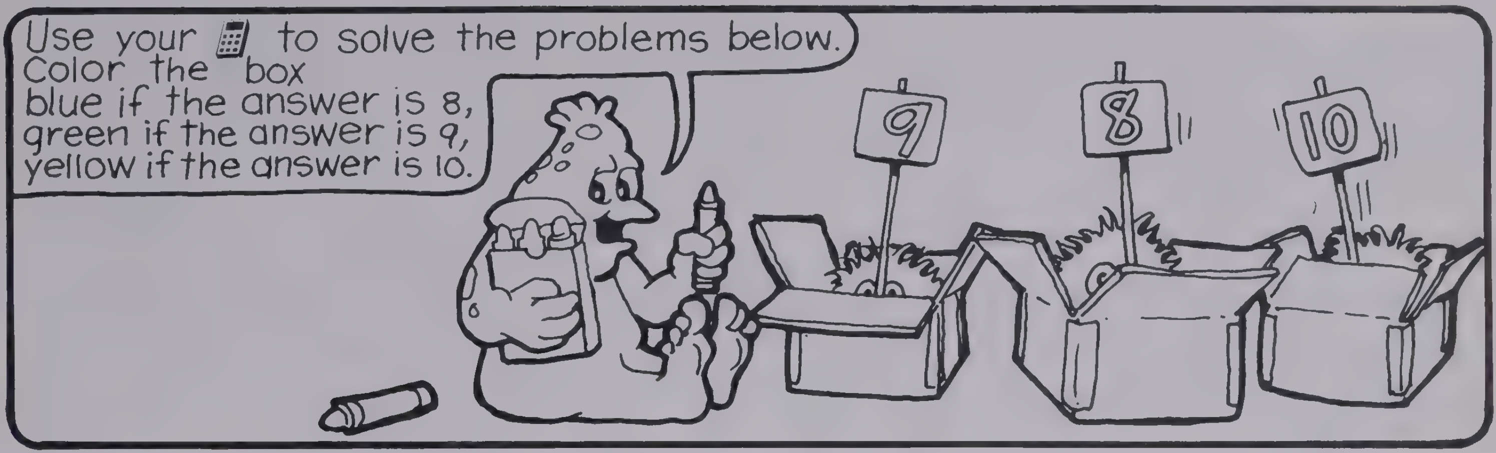


Use your 🖩 to solve the problems below.
Starting at 1, connect the dots in order to 21.

Start here.
Enter ⑦⊖⑥⊜

Color Facts

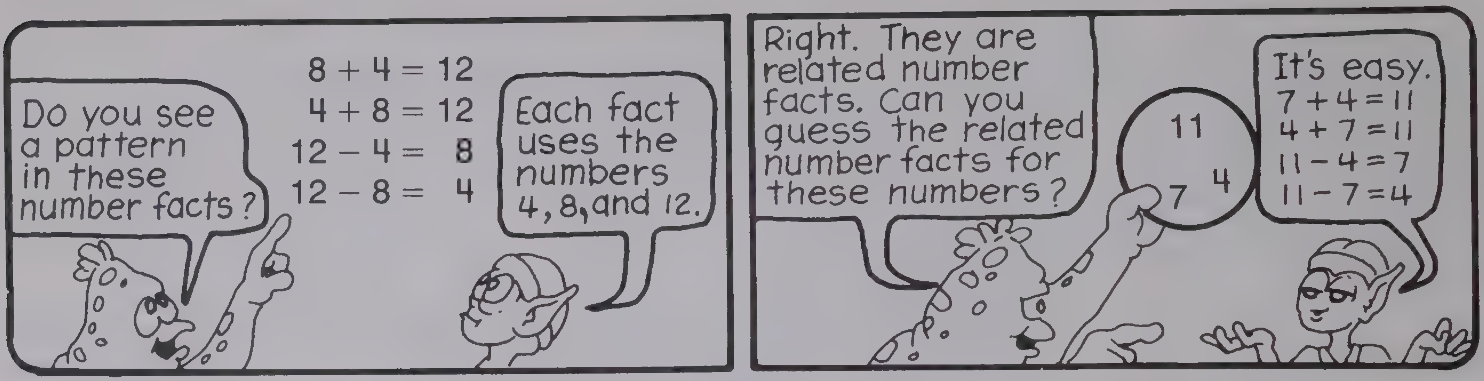
Name ____________________


Use your 🖩 to solve the problems below.
Color the box
blue if the answer is 8,
green if the answer is 9,
yellow if the answer is 10.
9
8
10

7+1	10−1	5+4	3+3	1+1	0+9	8+1	2+6
4+5	4+2	1+4	10+0	5+5	7+7	2+2	9−0
7+2	2+1	2+8	3+4	10+10	6+4	6+1	11−2
3+1	12−2	12−10	6+2	8+0	9+9	0+10	1+3
4+3	7+3	8+3	4+4	9−1	0+7	15−5	0+4
6+3	7+0	17−7	2+3	16−1	10−0	3+2	5+4
8+1	3+8	8+8	8+2	16−6	4+1	15−10	1+8
3+5	10−1	2+7	16+1	6+6	3+6	9+0	10−2

Related Number Facts

Name ____________________


Do you see a pattern in these number facts?
8 + 4 = 12
4 + 8 = 12
12 − 4 = 8
12 − 8 = 4
Each fact uses the numbers 4, 8, and 12.
Right. They are related number facts. Can you guess the related number facts for these numbers?
11
7 4
It's easy.
7 + 4 = 11
4 + 7 = 11
11 − 4 = 7
11 − 7 = 4

Write two different addition equations and two different subtraction equations for each group of numbers below. Use your 🖩 to check each equation.

1. 7 6 13

7 + 6 = 13
___ + ___ = ___
13 − 6 = 7
___ − ___ = ___

2. 4 7 3

___ + ___ = ___
___ + ___ = ___
___ − ___ = ___
___ − ___ = ___

3. 11 6 5

____
____
____
____

4. 17 9 8

____
____
____
____

5. 10 7 3

____
____
____
____

6. 5 9 14

____
____
____
____

7. 8 15 7

____
____
____
____

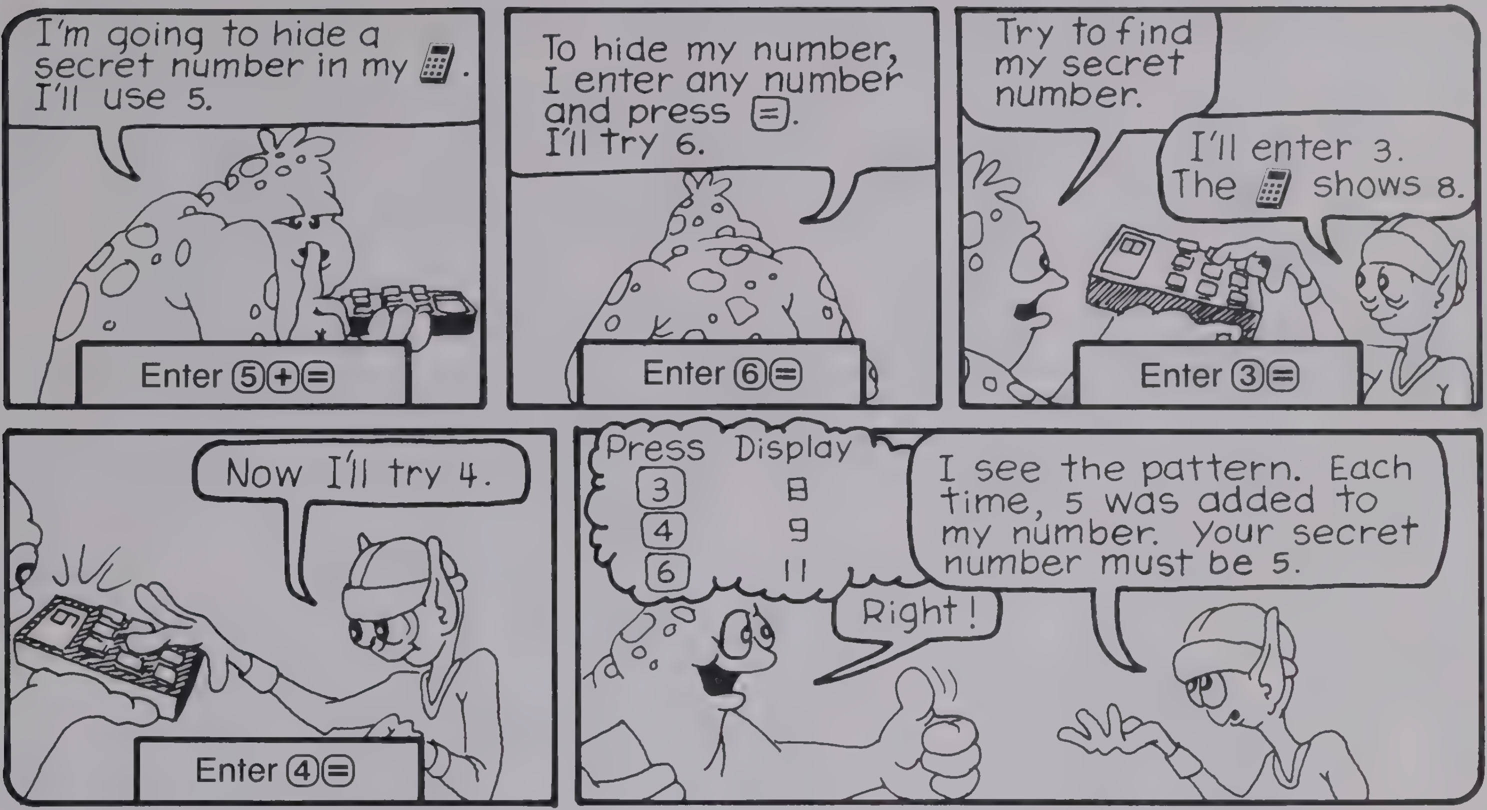
8. 2 8 10

____
____
____
____

Basic Facts
Addition
Patterns

What's My Number?

Name ______________________


I'm going to hide a secret number in my 🖩. I'll use 5.
Enter ⑤⊕⊜
To hide my number, I enter any number and press ⊜. I'll try 6.
Enter ⑥⊜
Try to find my secret number.
I'll enter 3. The 🖩 shows 8.
Enter ③⊜
Now I'll try 4.
Enter ④⊜
Press Display
3 8
4 9
6 11
I see the pattern. Each time, 5 was added to my number. Your secret number must be 5.
Right!

Try hiding a secret number of your own. Use one of the record sheets below to record your partner's results. Then have your partner hide a secret number from you.

Press	Display	Press	Display	Press	Display
2	______	2	______	2	______
3	______	3	______	3	______
4	______	4	______	4	______
5	______	5	______	5	______
10	______	10	______	10	______
100	______	100	______	100	______
Secret number:	______	Secret number:	______	Secret number:	______

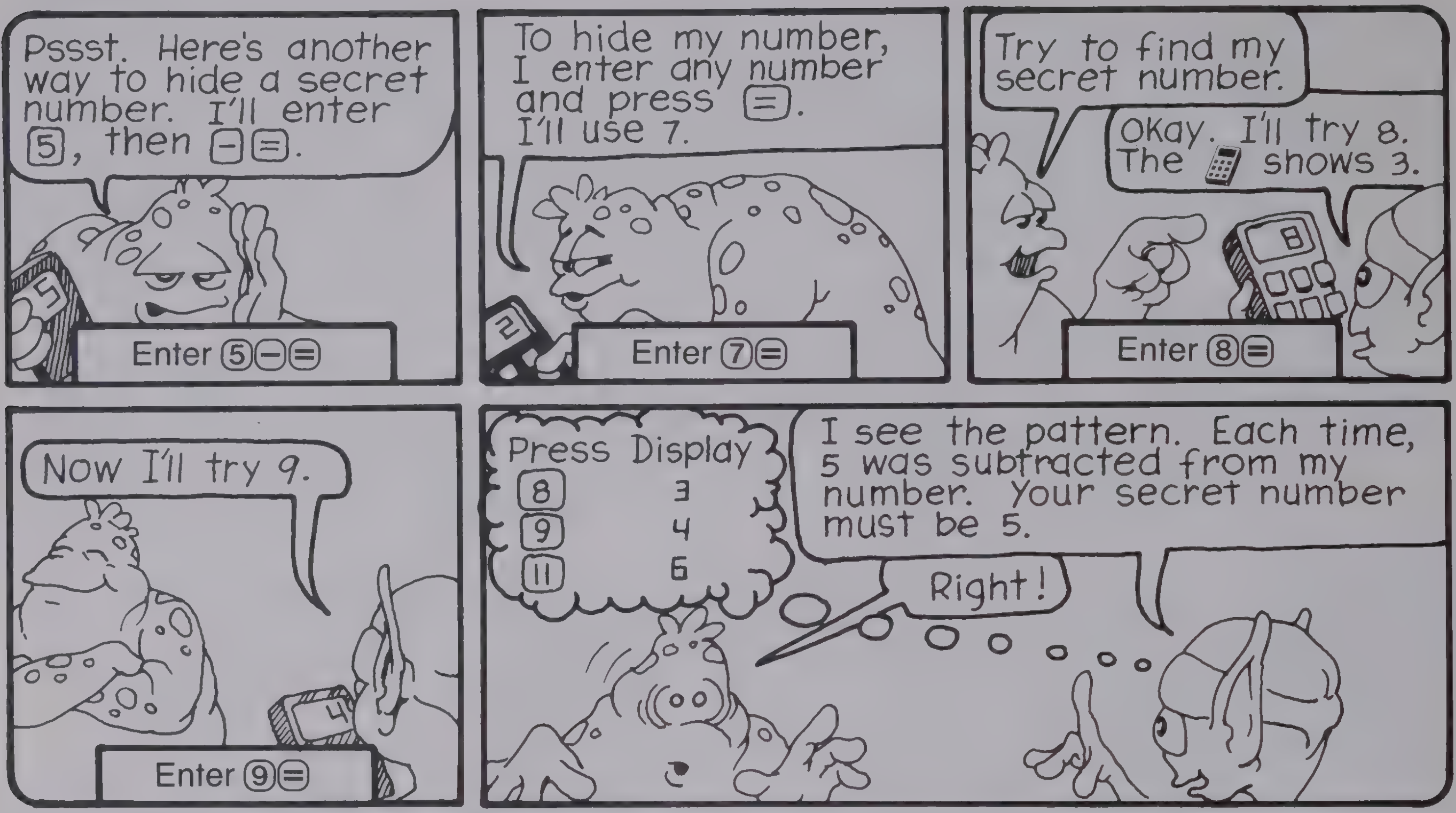
Fill in your own numbers.

Press	Display	Press	Display	Press	Display
______	______	______	______	______	______
______	______	______	______	______	______
______	______	______	______	______	______
______	______	______	______	______	______
Secret number:	______	Secret number:	______	Secret number:	______

Basic Facts
Subtraction
Patterns

Hide-a-Number

Name ______________________


Pssst. Here's another way to hide a secret number. I'll enter 5, then − =.
Enter 5 − =
To hide my number, I enter any number and press =. I'll use 7.
Enter 7 =
Try to find my secret number.
Okay. I'll try 8. The 🖩 shows 3.
Enter 8 =
Now I'll try 9.
Enter 9 =
Press Display
8 3
9 4
11 6
I see the pattern. Each time, 5 was subtracted from my number. Your secret number must be 5.
Right!

Try hiding a secret number. Use one of the record sheets below to record all results. Then have your partner hide a secret number from you.

Press	Display
10	______
9	______
8	______
7	______
6	______
100	______

Secret number: ______

Press	Display
10	______
9	______
8	______
7	______
6	______
100	______

Secret number: ______

Press	Display
10	______
9	______
8	______
7	______
6	______
100	______

Secret number: ______

Press	Display
10	______
9	______
8	______
7	______
6	______

Secret number: ______

Fill in your own numbers.

Press	Display
10	______
______	______
______	______
______	______
______	______

Secret number: ______

Press	Display
10	______
______	______
______	______
______	______
______	______

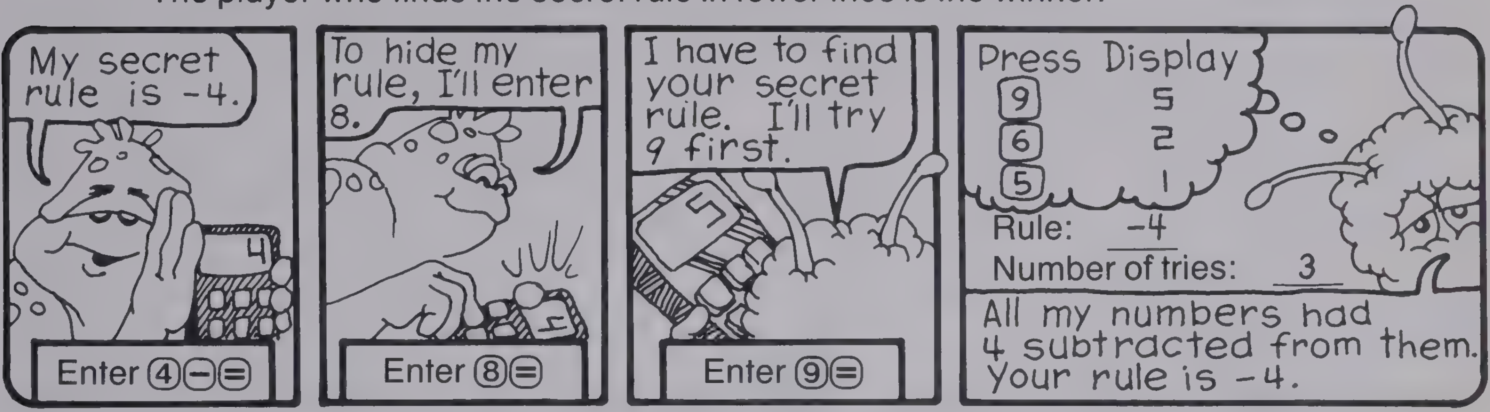
Secret number: ______

Basic Facts
Problem Solving
Patterns

What's My Rule?

Name ____________________

Number of Players: 2
Materials: 🖩
Object of Game: To find the secret rule
Rules: Enter a number and ⊕ or ⊖ in your 🖩 to make a secret rule.
Hide your rule by pressing any number and ⊜.
Your opponent must find your secret rule by entering numbers and recording the results.
After your opponent finds your secret rule, he or she enters a secret rule for you to find.
The player who finds the secret rule in fewer tries is the winner.


My secret rule is -4.
4
Enter ④⊖⊜
To hide my rule, I'll enter 8.
Enter ⑧⊜
I have to find your secret rule. I'll try 9 first.
5
Enter ⑨⊜
Press Display
9 5
6 2
5 1
Rule: -4
Number of tries: 3
All my numbers had 4 subtracted from them. Your rule is -4.

Fill in your own numbers.

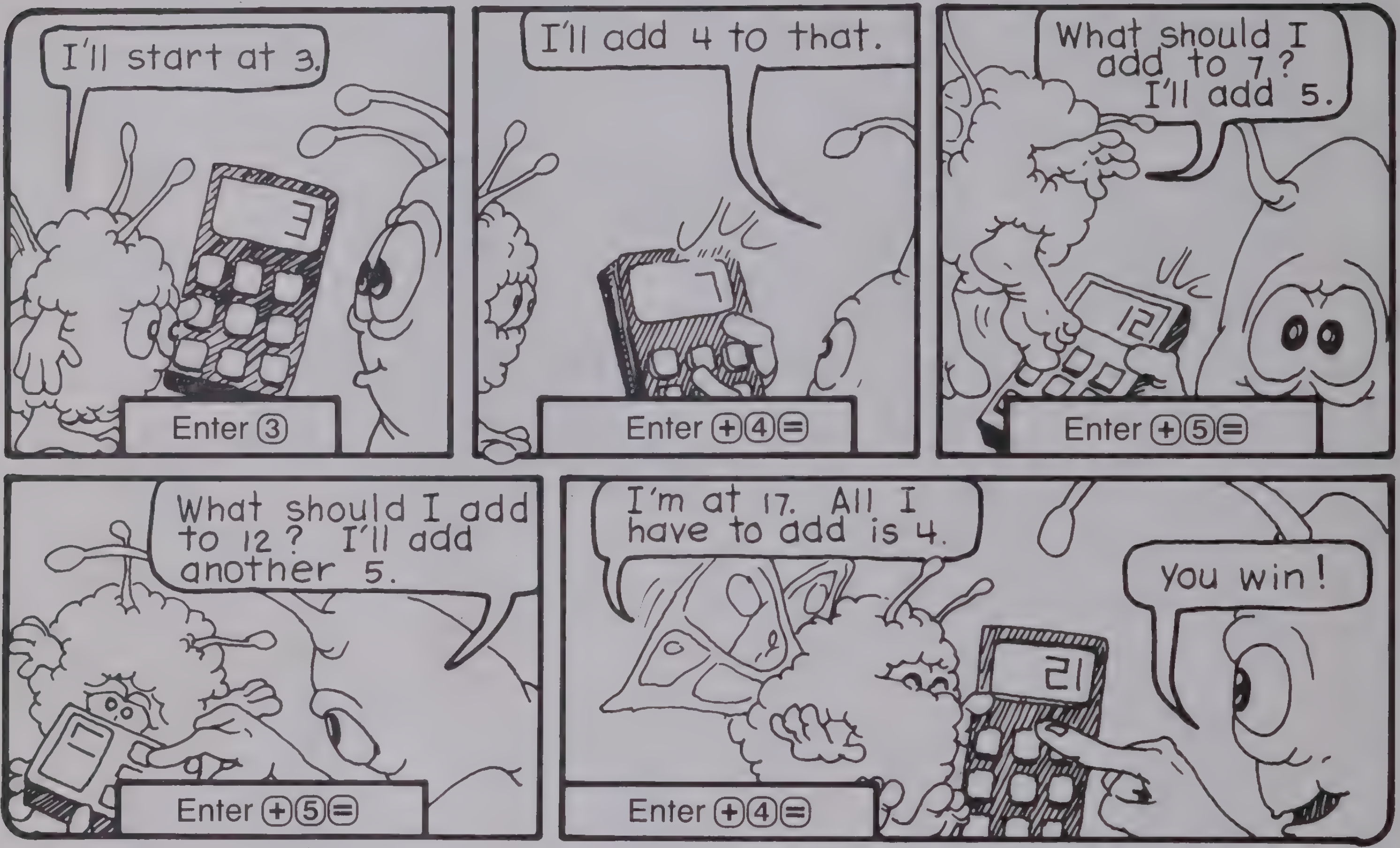
Game 1				Game 2			
Press	Display	Press	Display	Press	Display	Press	Display
8	____	8	____	____	____	____	____
6	____	6	____	____	____	____	____
5	____	5	____	____	____	____	____
2	____	2	____	____	____	____	____
1	____	1	____	____	____	____	____
Rule: ____		Rule: ____		Rule: ____		Rule: ____	
Number of tries: ____		Number of tries: ____		Number of tries: ____		Number of tries: ____	

Game 3				Game 4			
Press	Display	Press	Display	Press	Display	Press	Display
____	____	____	____	____	____	____	____
____	____	____	____	____	____	____	____
____	____	____	____	____	____	____	____
____	____	____	____	____	____	____	____
Rule: ____		Rule: ____		Rule: ____		Rule: ____	
Number of tries: ____		Number of tries: ____		Number of tries: ____		Number of tries: ____	

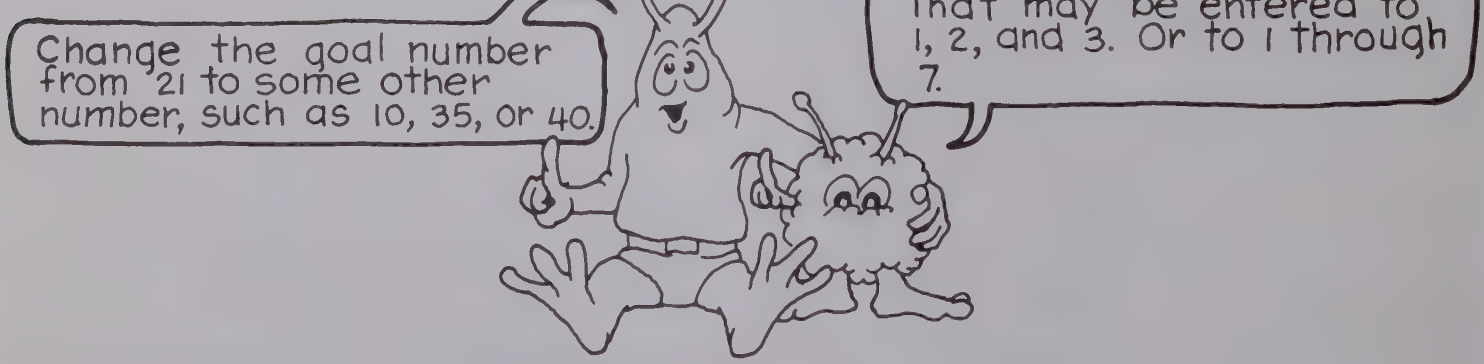
21 or Bust

Name ______________________

Number of Players: 2
Materials: 🖩
Object of Game: To reach the goal number through addition
Rules: Enter 1, 2, 3, 4, or 5 in your 🖩.
Give the 🖩 to your opponent. He or she adds 1, 2, 3, 4, or 5 to the displayed number.
Take turns adding 1, 2, 3, 4, or 5 to the total.
The first player to reach 21 is the winner. If you go over 21, you "bust", or lose.


I'll start at 3.
3
Enter ③
I'll add 4 to that.
7
Enter ⊕④⊜
What should I add to 7? I'll add 5.
12
Enter ⊕⑤⊜
What should I add to 12? I'll add another 5.
17
Enter ⊕⑤⊜
I'm at 17. All I have to add is 4.
you win!
21
Enter ⊕④⊜

Variations:

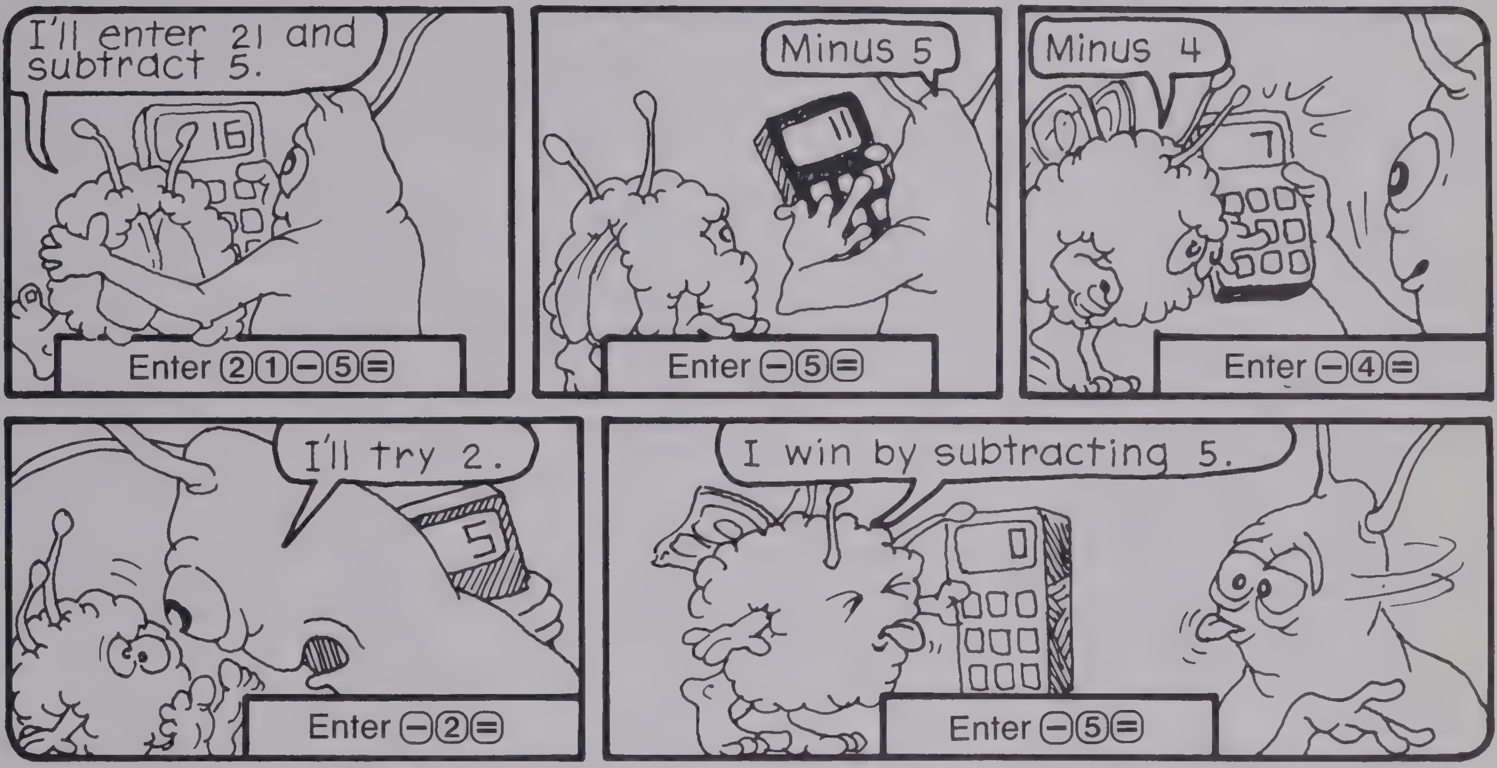

Change the goal number from 21 to some other number, such as 10, 35, or 40.
Then change the numbers that may be entered to 1, 2, and 3. Or to 1 through 7.

Problem Solving
Basic Facts
Subtraction

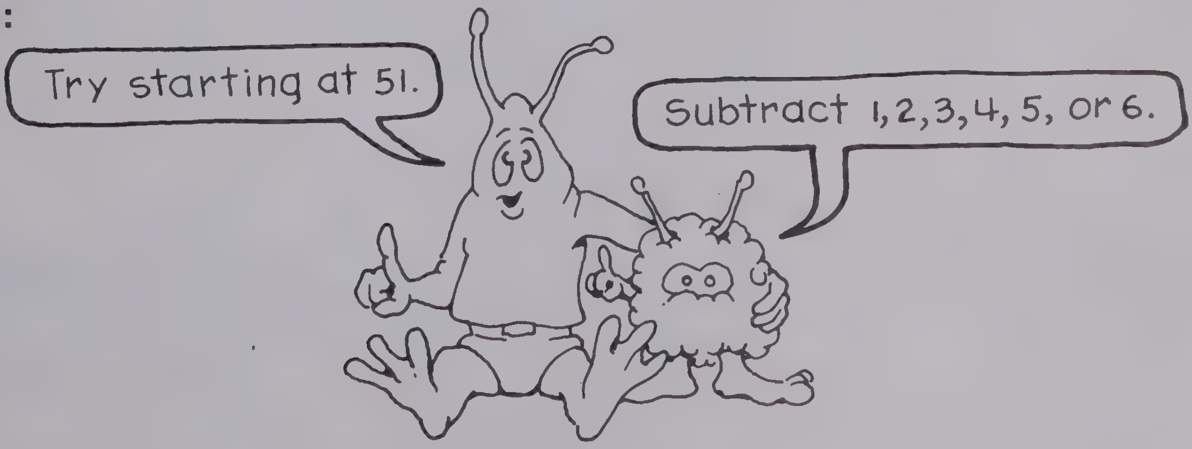
Zero or Bust

Name ______________________

Number of Players: 2
Materials: 🖩
Object of Game: To reach 0 through subtraction
Rules: Enter 21 in your 🖩 and subtract 1, 2, 3, 4, or 5.
Give the 🖩 to your opponent. He or she subtracts 1, 2, 3, 4, or 5 from the display number.
Take turns subtracting 1, 2, 3, 4, or 5.
The first player to reach 0 is the winner.
If the display shows a negative number, you "bust", or lose.



Variations:


Try starting at 51.
Subtract 1,2,3,4,5, or 6.

Problem Solving
Addition and Subtraction

Odds and Ends

Name ______________________

Use your 🖩 to find the answers to these questions.

1. Jan has 4 pencils.
   Larry has 7 pencils.
   Jan and Larry have ______ pencils in all.

2. Mr. Jones has 10 tennis balls.
   Linda has 3 tennis balls.
   Mr. Jones and Linda have ______ tennis balls in all.

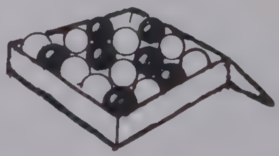
3. Mary and Laurie have 8 dresses in all.
   Laurie has 3 dresses.
   Mary has ______ dresses.

4. Lucy and Bob have 15 socks.
   Lucy owns 6 of the socks.
   Bob has ______ socks.

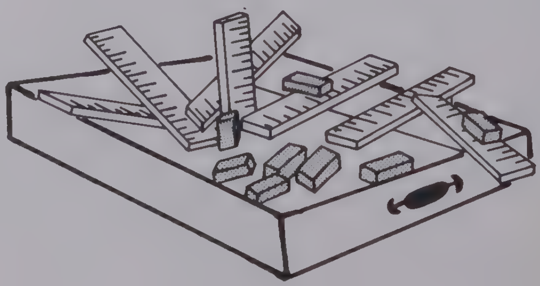
5. John, Ellen, and Joe have 18 baseball cards.
   Ellen has 5 cards.
   Together, John and Joe have ______ cards.

6. Richard has 4 books.
   Mary has 7 books.
   Mary has ______ more books than Richard.

7. How many marbles are in the box? ______
   Jenny's marbles are black. How many does she have? ______
   The rest of the marbles are Marvin's. How many does he have? ______
   Who has more marbles? __________



8. How many rulers does Mrs. Tate have? ______
   How many erasers? ______
   How many things are there in the drawer? ______



Applications
Money
Addition

Money

Name ______________________

We see:					
We say:	Half Dollar	Quarter	Dime	Nickel	Penny
We write:	50¢	25¢	10¢	5¢	1¢
or:	$.50	$.25	$.10	$.05	$.01
We enter:	⊡⑤⓪	⊡②⑤	⊡①⓪	⊡⓪⑤	⊡⓪①

Use your 🖩 to find the total amount in each row.

1. 50¢ 25¢ 10¢
We write: $.50 + $.25 + $.10 = ______
We enter: ⊡⑤⓪⊕⊡②⑤⊕⊡①⓪⊜

2. 50¢ 10¢ 25¢ 5¢
$.50 + $.10 + ______ + ______ = ______

3. 10¢ 10¢ 5¢ 5¢
______ + ______ + ______ + ______ = ______

4. 10¢ 5¢ 5¢ 1¢ 1¢
______ + ______ + ______ + ______ + ______ = ______

5. 50¢ 25¢ 10¢ 1¢
______ + ______ + ______ + ______ = ______

6. 25¢ 10¢ 10¢ 1¢
______ + ______ + ______ + ______ = ______

Applications
Money
Addition

More Money

Name ______________________

Use your 🖩 to find the total amount in each row.

1¢ 25¢ 25¢ 10¢

1. $.01 + $.25 + ______ + ______ = ______

25¢ 25¢ 5¢ 5¢ 10¢

2. ______ + ______ + ______ + ______ + ______ = ______

5¢ 50¢ 5¢ 10¢ 1¢

3. ______ + ______ + ______ + ______ + ______ = ______

25¢ 1¢ 5¢ 1¢ 10¢ 50¢

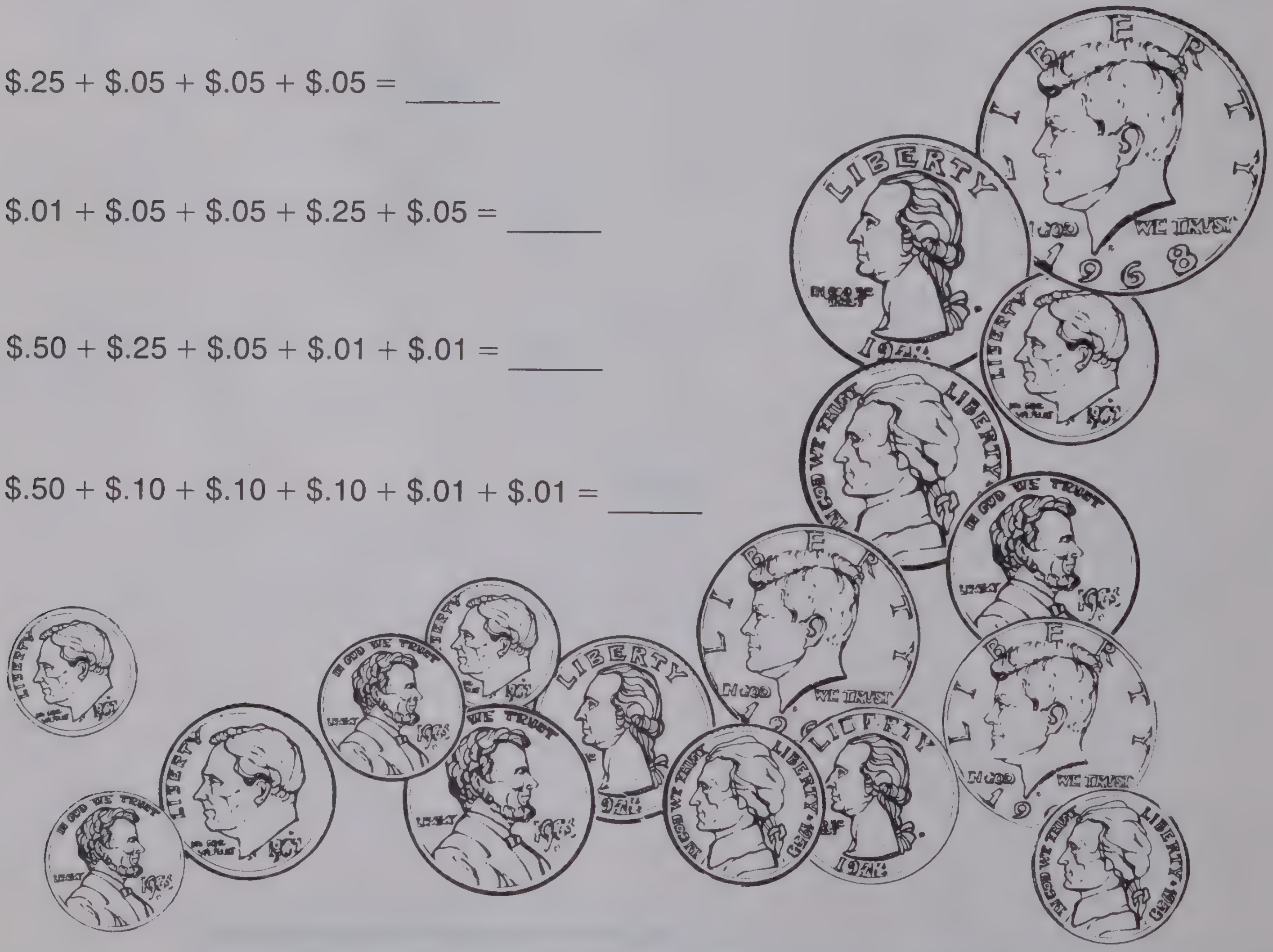
4. ______ + ______ + ______ + ______ + ______ + ______ = ______

5. $.25 + $.05 + $.05 + $.05 = ______

6. $.01 + $.05 + $.05 + $.25 + $.05 = ______

7. $.50 + $.25 + $.05 + $.01 + $.01 = ______

8. $.50 + $.10 + $.10 + $.10 + $.01 + $.01 = ______



Applications
Money
Addition

More Than One Dollar

Name ______________________

Try this addition problem on your 🖩 .
$.50 + $.50 + $.25 + $.10 = 1.35

This number means 1 dollar and 35 cents.
1.35

We write 1 dollar and 35 cents like this: $1.35

Use your 🖩 to find the total amount in each row below. Write each sum in dollar and cent notation.

1. $.50 + $.25 + $.25 + $.05 + $.10 = ______
   __1__ dollar and __15__ cents.

2. $.50 + $.25 + $.25 + $.25 + $.05 + $.01 = ______
   ______ dollar and ______ cents

3. $.50 + $.50 + $.01 + $.10 = ______
   ______ dollar and ______ cents

4. $.25 + $.50 + $.10 + $.10 + $.05 = ______
   ______ dollar and ______ cents

5. $.25 + $.25 + $.25+ $.10 + $.10 + $.10 = ______
   ______ dollar and ______ cents

6. $.50 + $.10 + $.01 + $.01 + $.50 = ______
   ______ dollar and ______ cents

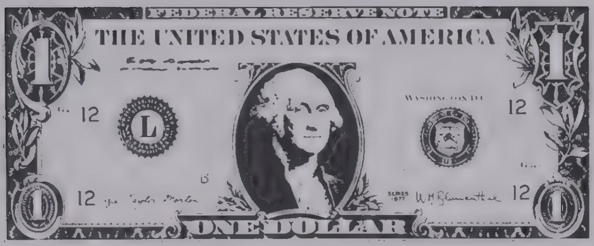
7. $.50 + $.50 + $.05 + $.01 = ______
   ______ dollar and ______ cents

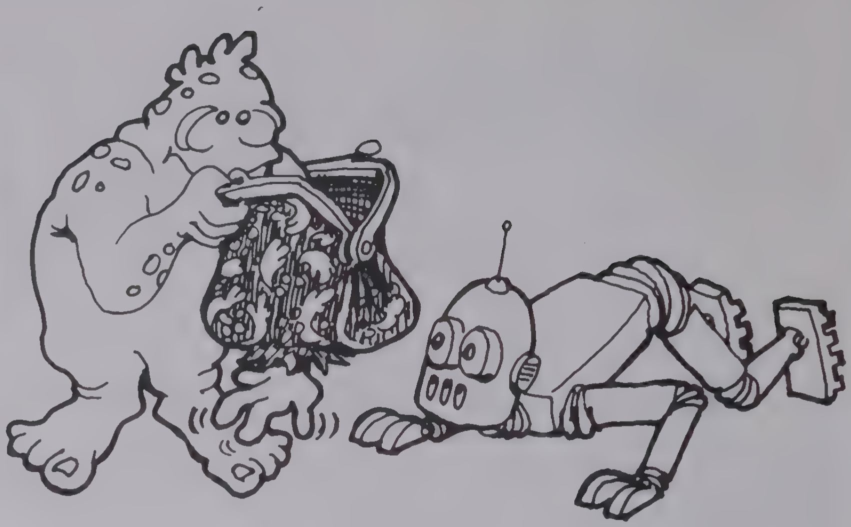
8. $.50 + $.25 + $.25 + $.01 + $.01 = ______
   ______ dollar and ______ cents

Applications
Money
Addition

More With Dollars

Name ____________________





To enter 1 dollar in your 🖩 :
Enter ①⊡⓪⓪
To enter 25 cents in your 🖩 :
Enter ⊡②⑤
To find this sum → $1.00 + $.25 = ______ :
Enter ①⊡⓪⓪⊕⊡②⑤⊜

Use your 🖩 to find the total amount in each row below.

	$1.00		5¢		5¢		1¢		1¢		
1.	$1.00	+	$.05	+	______	+	______	+	______	=	______
	$1.00		25¢		5¢		5¢				
2.	______	+	______	+	______	+	______	=	______		
	$1.00		$1.00		10¢		1¢				
3.	______	+	______	+	______	+	______	=	______		

4. $1.00 + $1.00 + $1.00 + $.10 + $.10 + $.10 + $.05 = ______

5. $1.00 + $1.00 + $.25 + $.10 + $.05 + $.05 + $.01 = ______

6. $1.00 + $1.00 + $1.00 + $1.00 + $.50 + $.50 + $.05 = ______

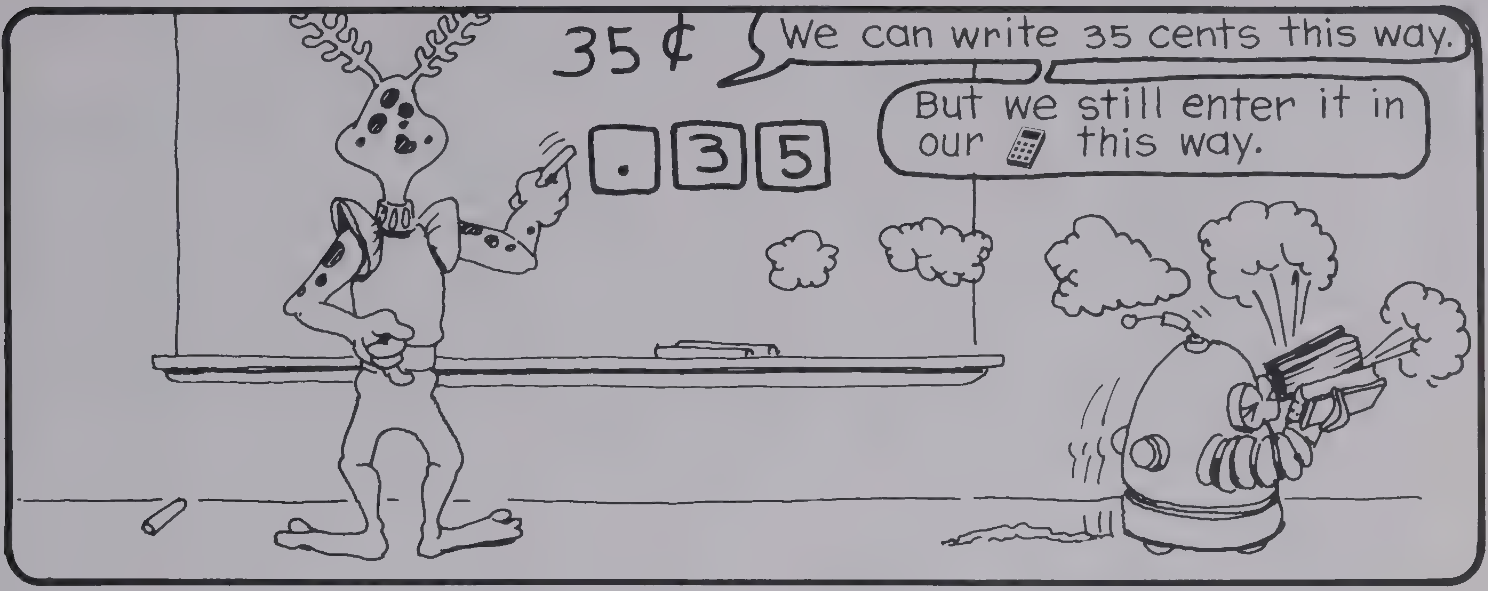
7. $1.00 + $1.00 + $.50 + $.05 + $.50 = ______

8. $1.00 + $.50 + $.25 + $.25 + $.10 = ______

Applications
Money
Addition

Calculator Cents

Name ____________________


35¢
We can write 35 cents this way.
. 3 5
But we still enter it in our 🖩 this way.

Use your 🖩 to find each sum below.

1. 38¢ + 48¢ = ________

2. 10¢ + 15¢ + 2¢ + 14¢ = ________

3. 11¢ + 23¢ + 61¢ = ________

4. $1.53 + 9¢ + 17¢ = _____

5. 7¢ + 31¢ + 16¢ + 45¢ = ________

6. 5¢ + 15¢ + $1.20 + $1.03 + $2.37 = _____

7. $1.72 + $2.26 = _____

8. 72¢ + 3¢ + 12¢ + 5¢ = ________

9. 71¢ + $1.17 + $2.99 = _____

10. 88¢ + 1¢ + 2¢ + 9¢ = ___________

Applications
Money
Addition and Subtraction

Spending Money

Name ______________________

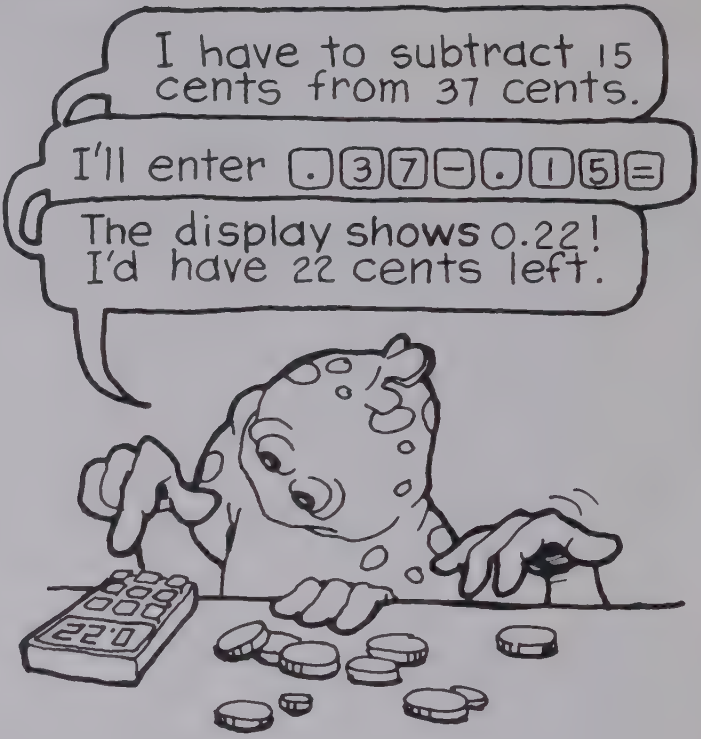
Use your 🖩 to answer each question below. After writing your answer, write the complete equation in the space provided.

You have $.37

You spend $.15

How much do you have left? $.22

.37 − .15 = .22


I have to subtract 15 cents from 37 cents.
I'll enter . 3 7 − . 1 5 =
The display shows 0.22! I'd have 22 cents left.
0.22

1. You have $.50
   You spend $.39
   How much do you have left? ______

   ______ − ______ = ______

2. You have a quarter.
   You spend $.12
   How much do you have left? ______

   ______ − ______ = ______

3. You have a quarter and a nickel.
   You spend $.27
   How much do you have left? ______

   ______ − ______ = ______

4. You have a half dollar and a dime.
   You spend $.53
   How much do you have left? ______

   ______ − ______ = ______

5. You have a half dollar and a quarter.
   You spend $.69
   How much do you have left? ______

   ______ − ______ = ______

6. You have a quarter and a dime.
   You spend $.29
   How much do you have left? ______

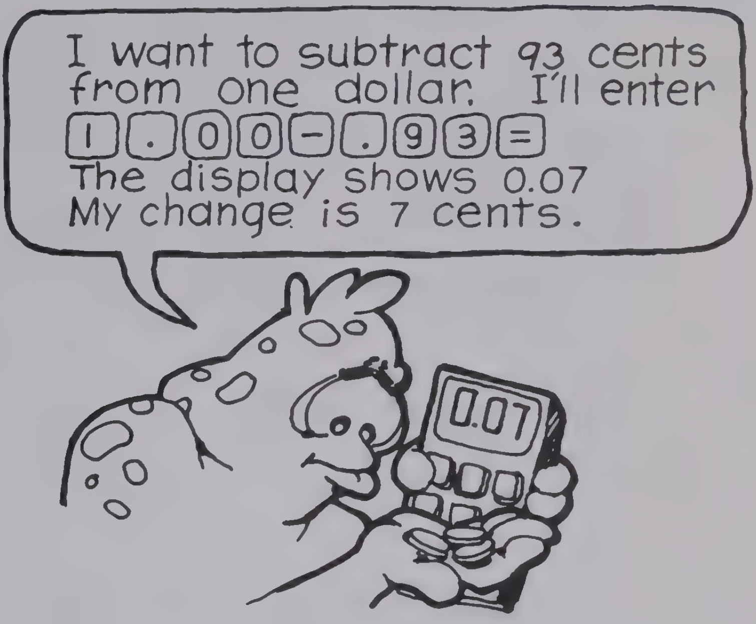
   ______ − ______ = ______

Applications
Money
Problem Solving
Subtraction

Making Change

Name ____________________

Use your 🖩 to answer each question below. After writing your answer, write the complete equation in the space provided.


I want to subtract 93 cents from one dollar. I'll enter 1 . 0 0 − . 9 3 = The display shows 0.07 My change is 7 cents.
0.07

You have one dollar.

You spend $.93

How much change do you get back? $.07

1.00 − .93 = .07

1. You have one dollar.
   You spend $.82
   How much change do you get back? ______
   ______ − ______ = ______

2. You have one dollar.
   You spend $.42
   How much change do you get back? ______
   ______ − ______ = ______

3. You have one dollar.
   You spend $.53
   How much change do you get back? ______
   ______ − ______ = ______

4. You have one dollar.
   You spend $.77
   How much change do you get back? ______
   ______ − ______ = ______

5. You have 5 dollars.
   You spend $2.98
   How much change do you get back? ______
   ______ − ______ = ______

6. You have 10 dollars.
   You spend $6.47
   How much change do you get back? ______
   ______ − ______ = ______

7. You have 10 dollars.
   You spend $3.47
   How much change do you get back? ______
   ______ − ______ = ______

8. You have 10 dollars.
   You spend $8.52
   How much change do you get back? ______
   ______ − ______ = ______

Applications
Problem Solving
Money
Addition and Subtraction

Dollars and Cents

Name ______________________

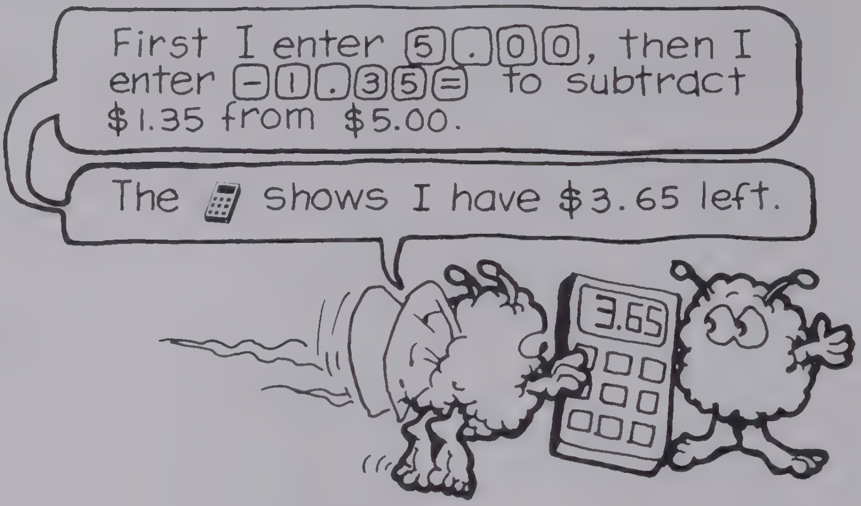
Use your 🖩 to answer each question below. After writing your answer, write the complete equation in the space provided.

You have: 1 five-dollar bill

You spend: $1.35

How much do you have left? $3.65

5.00 – 1.35 = 3.65


First I enter 5 . 0 0, then I enter − 1 . 3 5 = to subtract $1.35 from $5.00.
The 🖩 shows I have $3.65 left.
3.65

1. You have: 1 one-dollar bill
You spend: $.94
How much do you have left? ______
______ – ______ = ______

2. You have: 1 one-dollar bill
You spend: $.59
How much do you have left? ______
______ – ______ = ______

3. You have: 3 one-dollar bills
You spend: $2.28
How much do you have left? ______
______ – ______ = ______

4. You have: 10 one-dollar bills
You spend: $9.17
How much do you have left? ______
______ – ______ = ______

5. You have: 1 five-dollar bill
You spend: $1.98
How much do you have left? ______
______ – ______ = ______

6. You have: 1 ten-dollar bill
You spend: $3.56
How much do you have left? ______
______ – ______ = ______

7. You have: 1 five-dollar bill
You spend: $.87
How much do you have left? ______
______ – ______ = ______

8. You have: 2 five-dollar bills
You spend: $8.68
How much do you have left? ______
______ – ______ = ______

Applications
Money
Problem Solving
Addition and Subtraction

Look for the Facts

Name ____________________

Use your 🖩 to answer the questions below.

1. Jennifer is 5 years old. How old will she be in 6 years? ______

2. Linda has 43 baseball cards. She trades an old baseball glove for 18 more cards. How many cards does Linda have in all? ______

3. Sam's weekly allowance is $.85. One week he spent:

23¢ for an apple,
15¢ to mail a letter,
25¢ for milk.

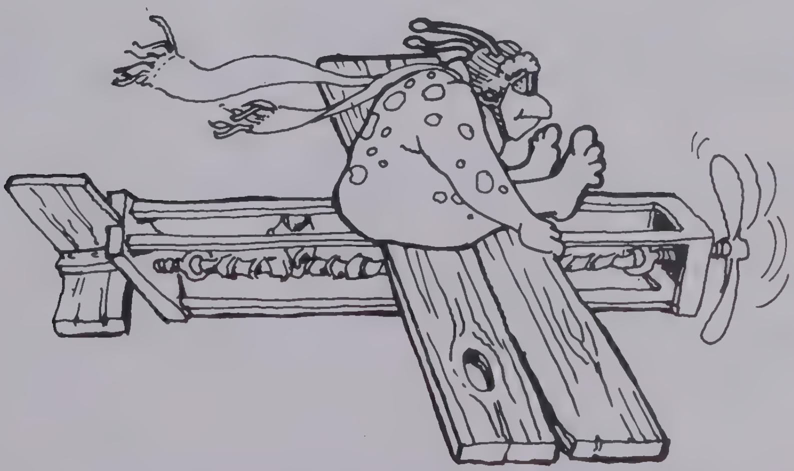
How much did Sam spend? __________

How much did Sam have left? __________

4. Jack's grandfather has 7 cats, 2 dogs, 3 cows, and 22 pigs on his farm. How many animals does he have altogether? ______

5. Troy wants to buy a model airplane. It costs $2.16. He has 19 pennies, 2 nickels, 1 dime, and 2 quarters.

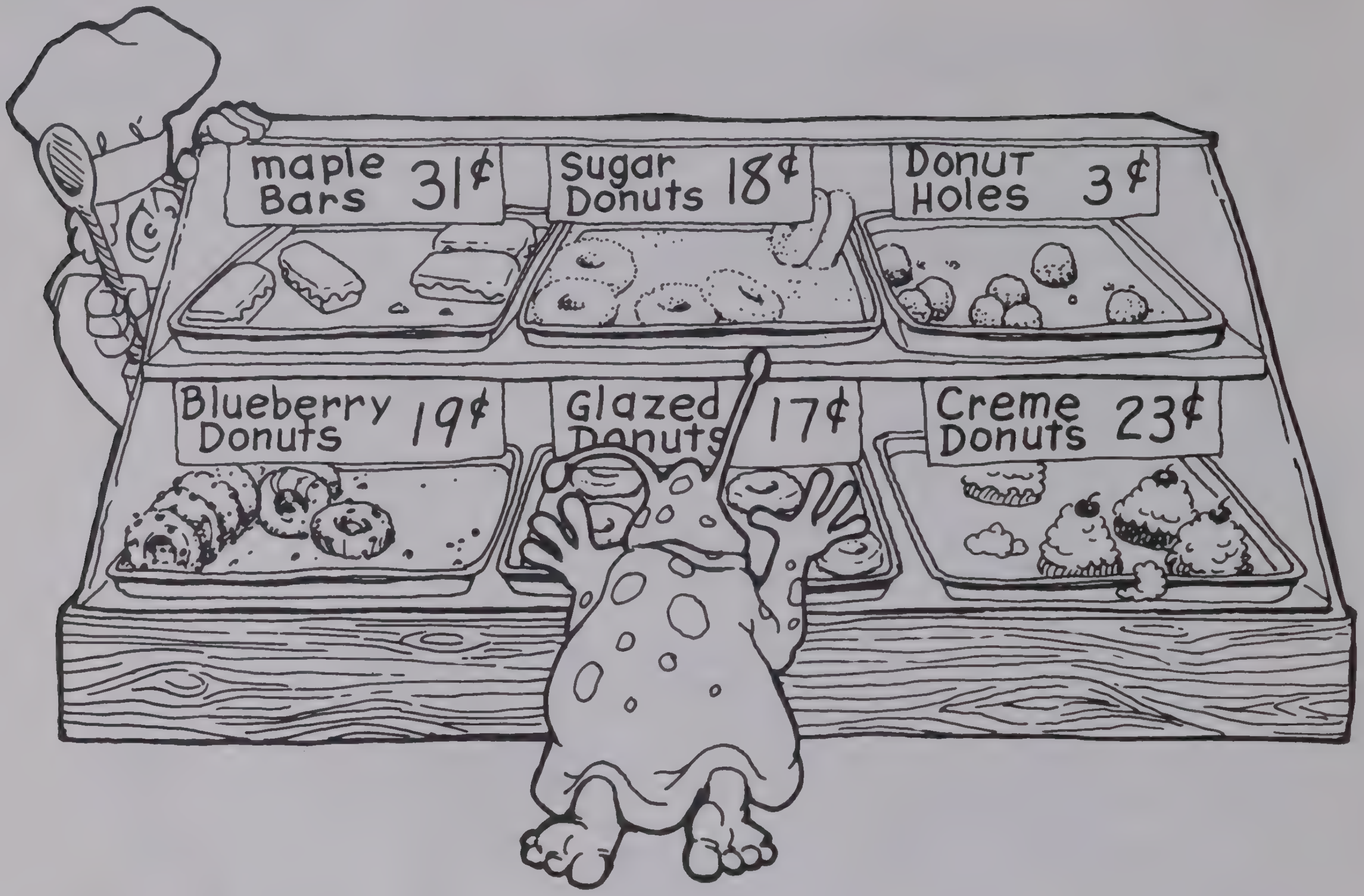
How much money does he have in pennies? ______
How much money does he have in nickels? ______
How much money does he have in dimes? ______
How much money does he have in quarters? ______
How much money does he have altogether? ______
Does he have enough to buy the airplane? ______



Applications
Problem Solving
Addition and Subtraction

At the Bakery

Name ______________________



Use your 🖩 to answer the questions below.

1. What would one maple bar and one glazed donut cost? ______

2. What would two blueberry donuts cost? ______

3. Would two sugar donuts cost more than two creme donuts? ______

4. If you wanted to buy one of each kind, how much money would you need?
____

5. Would one sugar donut cost more than 8 holes? ______

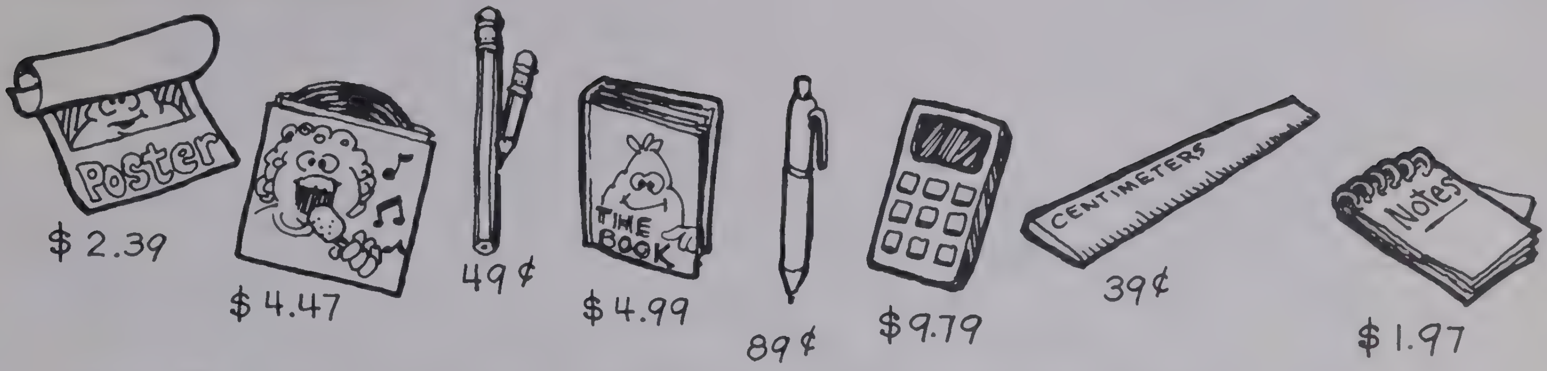
6. You have 60¢. Do you have enough to buy
3 maple bars? ______
3 blueberry donuts? ______
3 creme donuts? ______

7. How much would 1 blueberry donut and 5 holes cost? ______

Applications
Problem Solving
Money
Addition and Subtraction

Let's Go Shopping

Name ______________________



Use your 🖩 to answer the questions below. Then write the complete equation for each problem.

1. Jose wants to buy a metric ruler and a pen. How much money does he need? ______

.39 + .89 = ______

2. Debbie has saved just enough money to buy a record and a book. How much money does she have? ______

______ + ______ = ______

3. Carl has chosen a pen, a notebook, and a poster. How much money will he spend on these items? ______

______ + ______ + ______ = ______

If he pays for these items with a 10-dollar bill, how much change will he get back? ______

______ − ______ = ______

4. If Susan buys a calculator, a record, and a poster, how much will it cost her? ______

______ + ______ + ______ = ______

Susan has $20.00. How much change will she get back? ______

______ − ______ = ______

5. Ralph wants to spend his $5.00 on a record. Will he have enough left over to buy pencils? ______

______ − ______ = ______

6. Sandy wants to buy a calculator. She has only $6.00. How much more money does she need? ______

______ − ______ = ______

How much more does she need if she wants to buy a notebook as well? ______

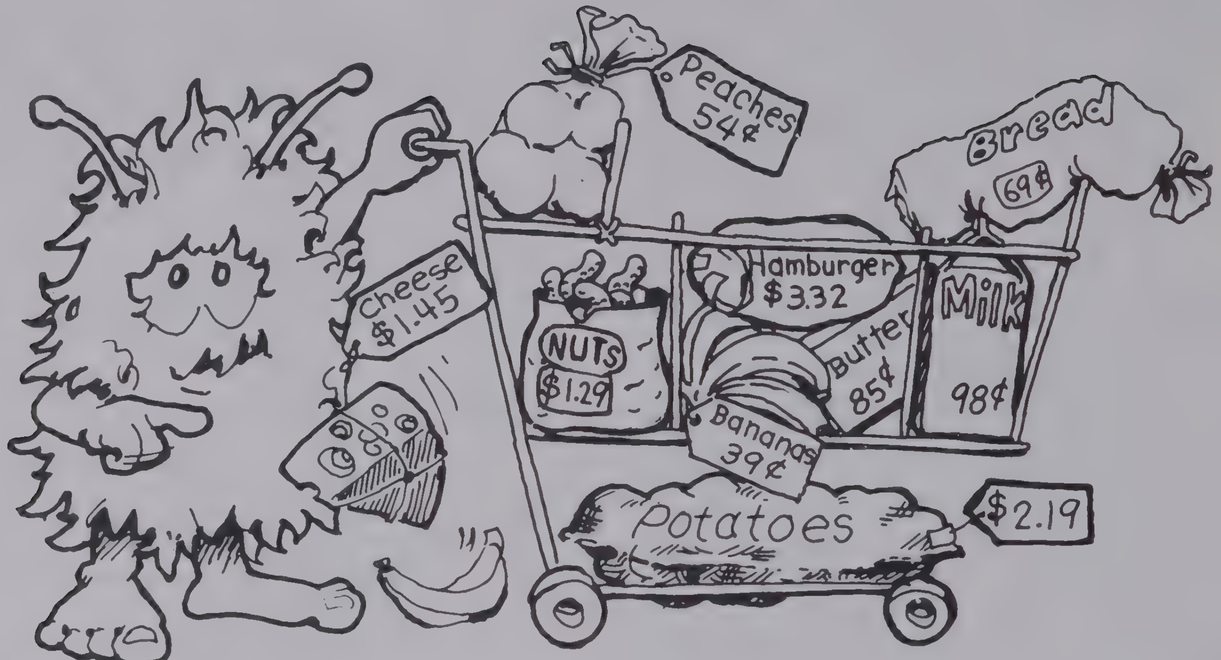
______ + ______ = ______

Applications
Problem Solving
Money
Addition and Subtraction

Grocery Shopping

Name ______________________________

You are shopping at a grocery store.



Use your 🖩 to answer the questions below.

1. If you buy just the hamburger, potatoes, and milk, how much money will you spend? ______
2. If you buy just the bread, cheese, and nuts, how much money will you spend? ______
3. If you have only $1.00 and you must buy peaches, what other item can you buy? ________

Suppose you buy all of the items in your cart.

4. How much money will you spend? ______
5. How much money will you get back if you pay with a 20-dollar bill? ______
6. You have only $10.00. If you cross the peaches and the nuts off your list, do you have enough money to buy the rest of the items? ______

   How much will the remaining items cost? ______
7. You decide to buy twice as much hamburger. Will $15.00 pay for everything in your cart? ______

   How much more money will you need? ______
8. Instead of buying one loaf of bread, you buy three loaves of bread. How much will all of your groceries cost? ______

Estimation
Rounding

Round About

Name ____________________

Work each problem below using these steps:

- Round each addend to the nearest ten.

$$\begin{array}{rcl} 28 & \longrightarrow & 30 \\ +\ \ 9 & \longrightarrow & 10 \end{array}$$

- Estimate the sum of the rounded numbers.

$$\begin{array}{r} 30 \\ +\ 10 \\ \hline 40 \end{array}$$

- Check your estimate by finding the actual sum on your 🖩.

1.
$$\begin{array}{rcl} 32 & \longrightarrow & 30 \\ +\ 17 & \longrightarrow & +\ \_\_\_ \\ \hline & & \_\_\_ \end{array}$$
Round.

2.
$$\begin{array}{rcl} 68 & \longrightarrow & \_\_\_ \\ +\ 11 & \longrightarrow & +\ \_\_\_ \\ \hline & & \_\_\_ \end{array}$$

3.
$$\begin{array}{rcl} 47 & \longrightarrow & \_\_\_ \\ +\ 45 & \longrightarrow & +\ \_\_\_ \\ \hline & & \_\_\_ \end{array}$$

4.
$$\begin{array}{rcl} 99 & & \_\_\_ \\ +\ \ 2 & & +\ \_\_\_ \\ \hline & & \_\_\_ \end{array}$$

5.
$$\begin{array}{rcl} 67 & & \_\_\_ \\ +\ 76 & & +\ \_\_\_ \\ \hline & & \_\_\_ \end{array}$$

6.
$$\begin{array}{rcl} 75 & & \_\_\_ \\ +\ 15 & & +\ \_\_\_ \\ \hline & & \_\_\_ \end{array}$$

7.
$$\begin{array}{rcl} 84 & & \_\_\_ \\ +\ 14 & & +\ \_\_\_ \\ \hline & & \_\_\_ \end{array}$$

8.
$$\begin{array}{rcl} 92 & & \_\_\_ \\ +\ \ 9 & & +\ \_\_\_ \\ \hline & & \_\_\_ \end{array}$$

Estimation
Rounding

Step by Step

Name ______________________

Work each problem below using these steps:

- Round each addend to the nearest ten.

12 → 10
32 → 30
+ 19 → + 20

- Estimate the sum of the rounded numbers.

10
30
+ 20
60

- Check your estimate by finding the actual sum on your 🖩. Are you close?

1.
24 → 20
27 → ___
+ 18 → + ___
___

2.
45 → ___
13 → ___
+ 21 → + ___
___

3.
15 → ___
99 → ___
+ 2 → + ___
___

4.
88 → ___
22 → ___
+ 44 → + ___
___

5.
16 → ___
91 → ___
+ 25 → + ___
___

6.
52 → ___
49 → ___
+ 51 → + ___
___

7.
19 → ___
9 → ___
+ 99 → + ___
___

8.
87 → ___
4 → ___
+ 15 → + ___
___

9.
62 → ___
47 → ___
+ 89 → + ___
___

10.
35 → ___
42 → ___
+ 39 → + ___
___

Estimation
Rounding
Addition

More About Less

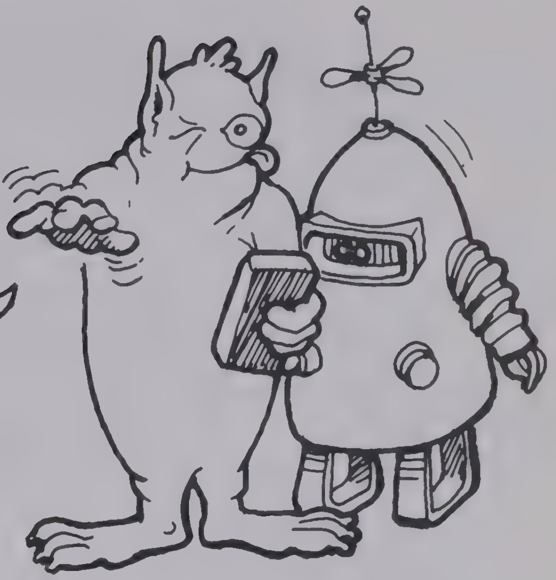
Name ____________________

Round to the nearest ten.

19 → 20
+ 28 → + 30

More than 60
[✓ About 50]
Less than 40

19 and 28 is about 50.
To check, I enter $\boxed{1}\boxed{9}\boxed{+}\boxed{2}\boxed{8}\boxed{=}$
on my 🖩. I'm right!
47 is close to 50.



- Round each addend to the nearest ten.
- Estimate the sum of the rounded numbers.
- Circle the answer closest to your estimate.
- Use your 🖩 to check your estimate.

1. 42 → ____
+ 19 → + ____

More than 70
About 60
Less than 50

2. 58 → ____
+ 27 → + ____

More than 70
About 60
Less than 50

3. 17 → ____
+ 44 → + ____

More than 70
About 60
Less than 50

4. 68 → ____
+ 27 → + ____

More than 90
About 80
Less than 70

5. 88 → ____
+ 35 → + ____

More than 150
About 140
Less than 130

6. 91 → ____
+ 82 → + ____

More than 180
About 170
Less than 160

7. 47 → ____
+ 56 → + ____

More than 130
About 120
Less than 110

8. 67 → ____
+ 18 → + ____

More than 100
About 90
Less than 80

9. 23 → ____
+ 99 → + ____

More than 120
About 110
Less than 100

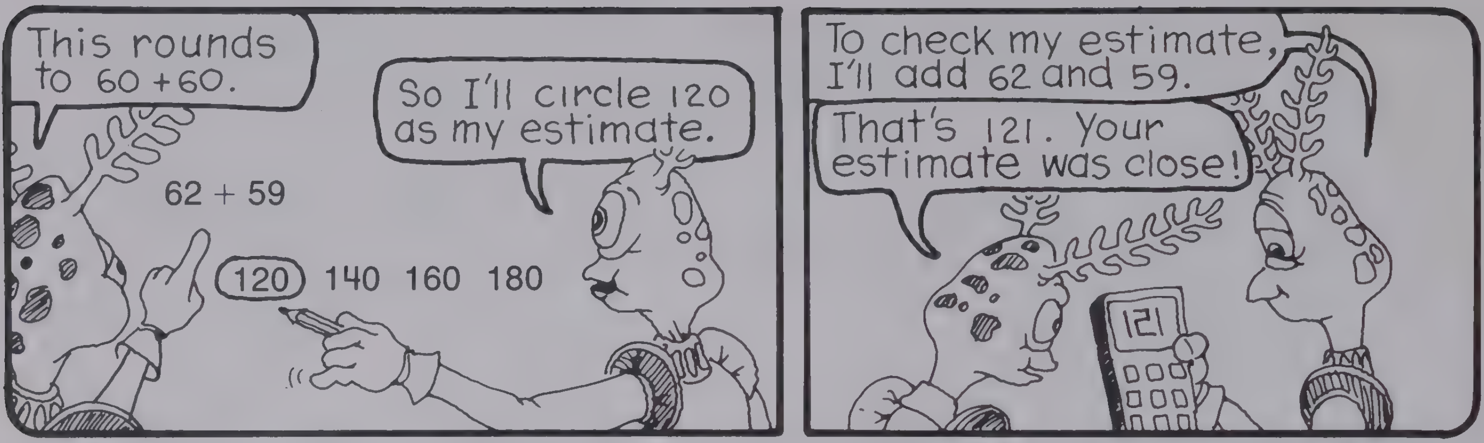
10. 44 → ____
+ 82 → + ____

More than 150
About 140
Less than 130

Estimation
Rounding
Addition

Circle Sum

Name ______________________


This rounds to 60 + 60.
So I'll circle 120 as my estimate.
62 + 59
120 140 160 180
To check my estimate, I'll add 62 and 59.
That's 121. Your estimate was close!
121

- Estimate each sum below.
- Circle the answer closest to your estimate.
- Use your 🖩 to check your estimate.

1. 48 + 49

80 100 120 140

2. 57 + 82

100 120 140 160

3. 77 + 44

100 120 140 160

4. 99 + 9

100 110 120 130

5. 47 + 68

100 110 120 130

6. 18 + 28 + 38

90 100 110 120

7. 23 + 31 + 15

70 80 90 100

8. 14 + 47 + 13

60 70 80 90

9. 44 + 17 + 9

70 80 90 100

10. 61 + 17 + 18

70 80 90 100

11. 21 + 23 + 20

60 70 80 90

12. 47 + 44 + 39

110 120 130 140

13. 52 + 48 + 17

110 120 130 140

14. 81 + 63 + 39

160 170 180 190

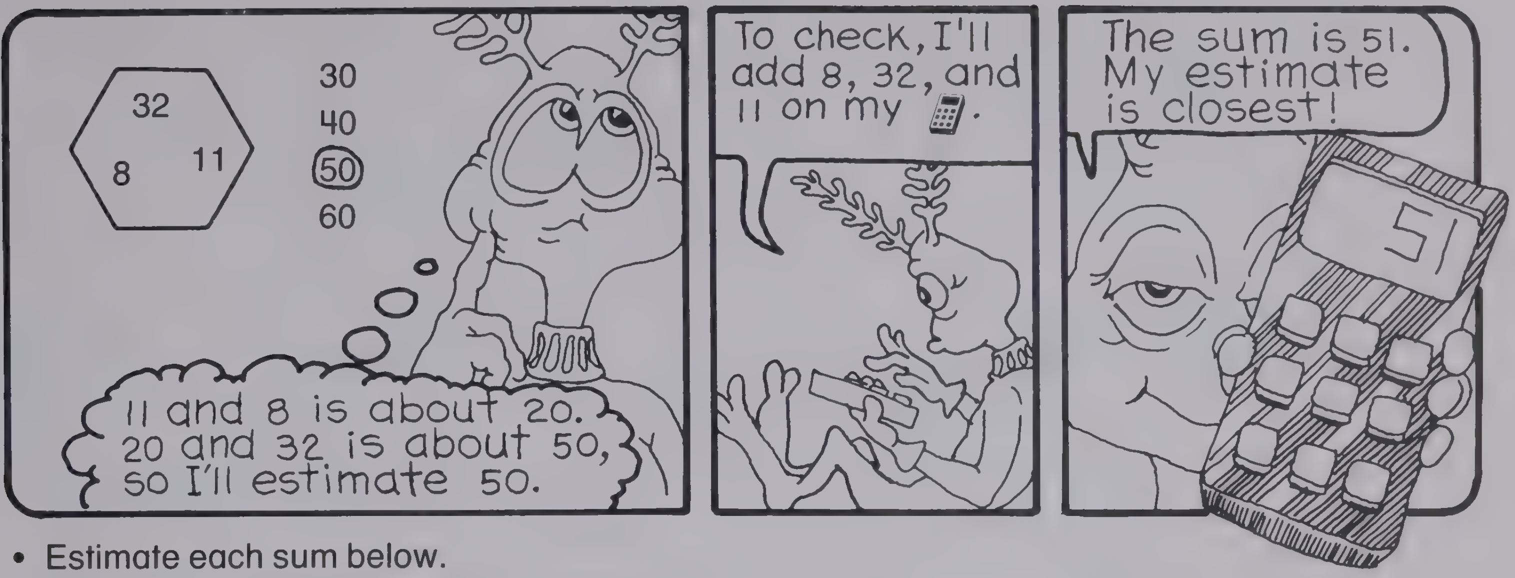
15. 69 + 72 + 68

200 210 230 240

Estimation
Rounding
Addition

Circle Sum More

Name ____________________


32
8
11
30
40
50
60
11 and 8 is about 20. 20 and 32 is about 50, so I'll estimate 50.
To check, I'll add 8, 32, and 11 on my 🖩.
The sum is 51. My estimate is closest!
51

- Estimate each sum below.
- Circle the answer closest to your estimate.
- Use your 🖩 to check your estimate.

1. 19 17 3
40
35
30

2. 7 11 53
90
80
70

3. 62 5 9
80
70
60

4. 14 13 25
60
50
40

5. 8 9 38
70
65
60

6. 15 19 33
90
80
70

7. 41 6 11
60
50
40

8. 59 18 4
90
80
70

9. 17 11 23 24 39
130
120
110
100

10. 45 21 13 18
100
90
80
70

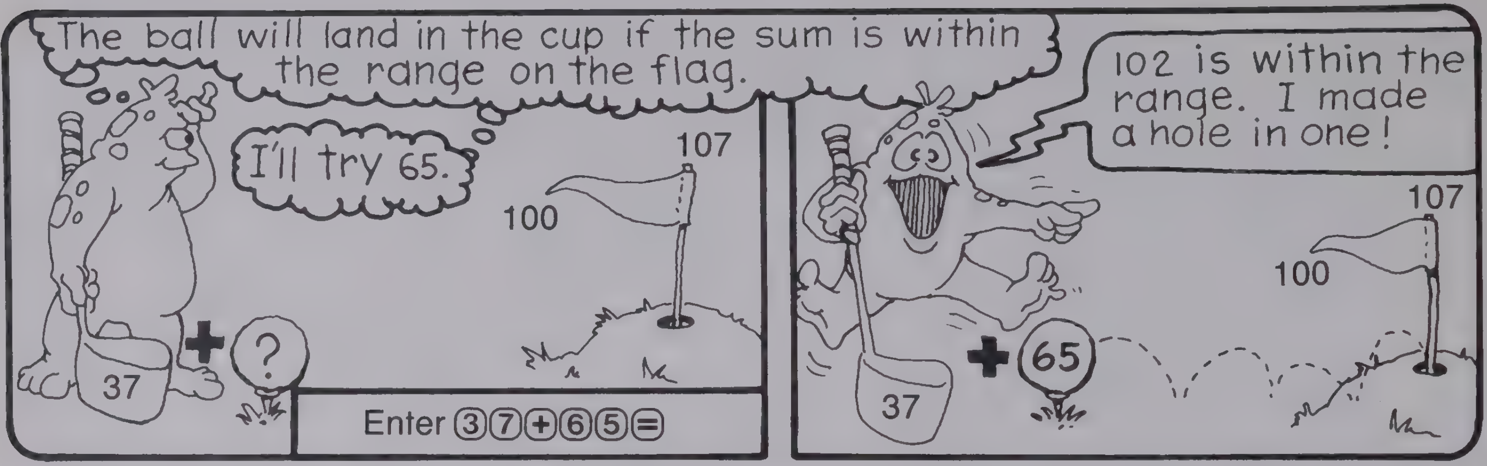
11. 62 38 9 17
130
120
110
100

12. 16 19 15 18 17
130
120
110
100

Estimation
Addition

Hole in One

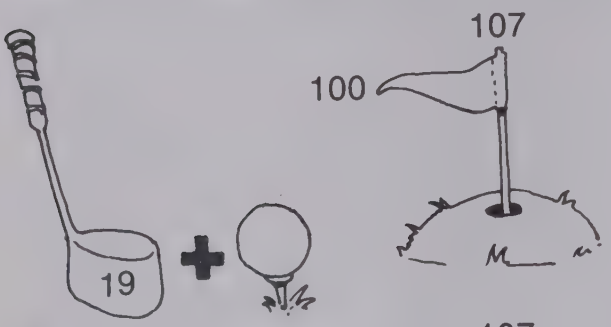
Name ____________________


The ball will land in the cup if the sum is within the range on the flag.
I'll try 65.
107
100
37
?
Enter ③⑦⊕⑥⑤⊜
102 is within the range. I made a hole in one!
107
100
37
65

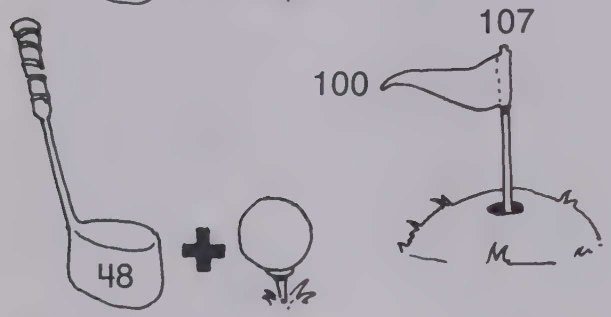
Try these. Use your 🖩 to check if your sum is within the range. If your first estimate does not work, pick another number.

How many holes in one can you make?

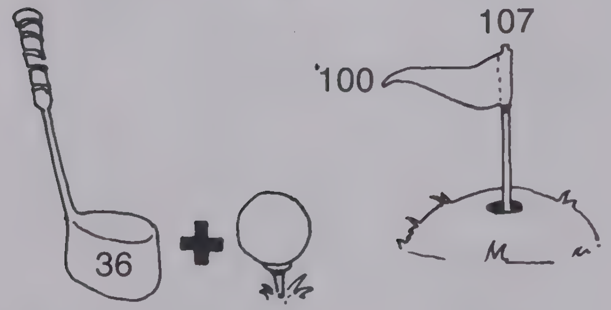
1.



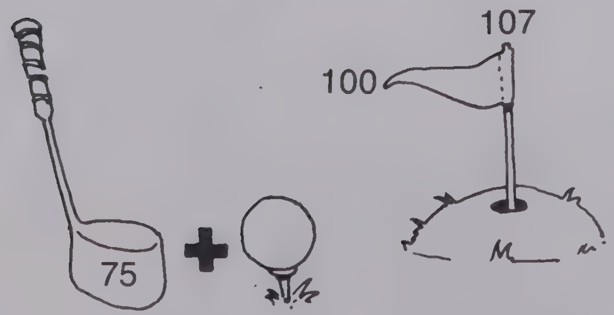
2.



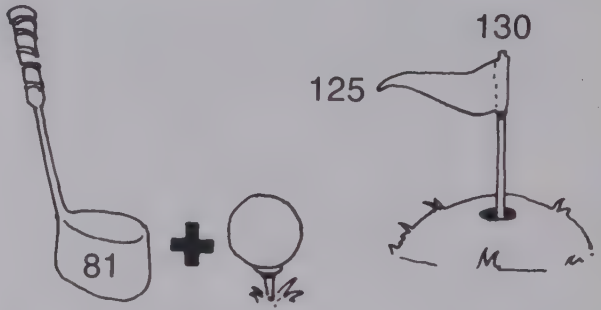
3.



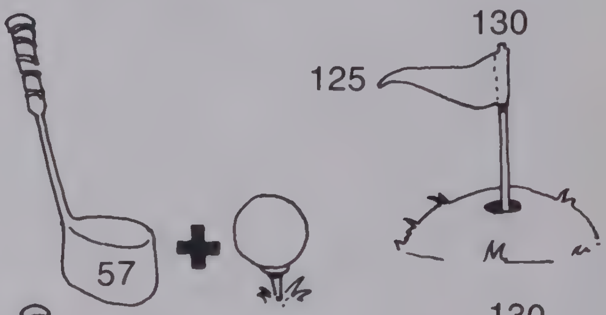
4.



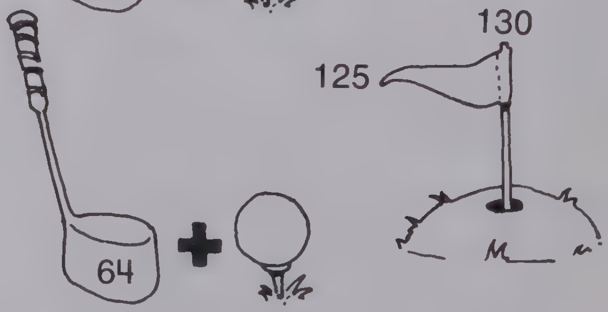
5.



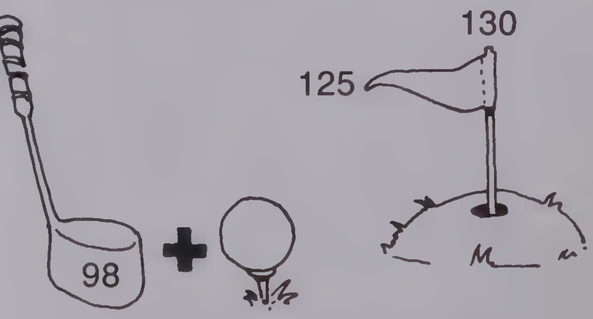
6.



7.



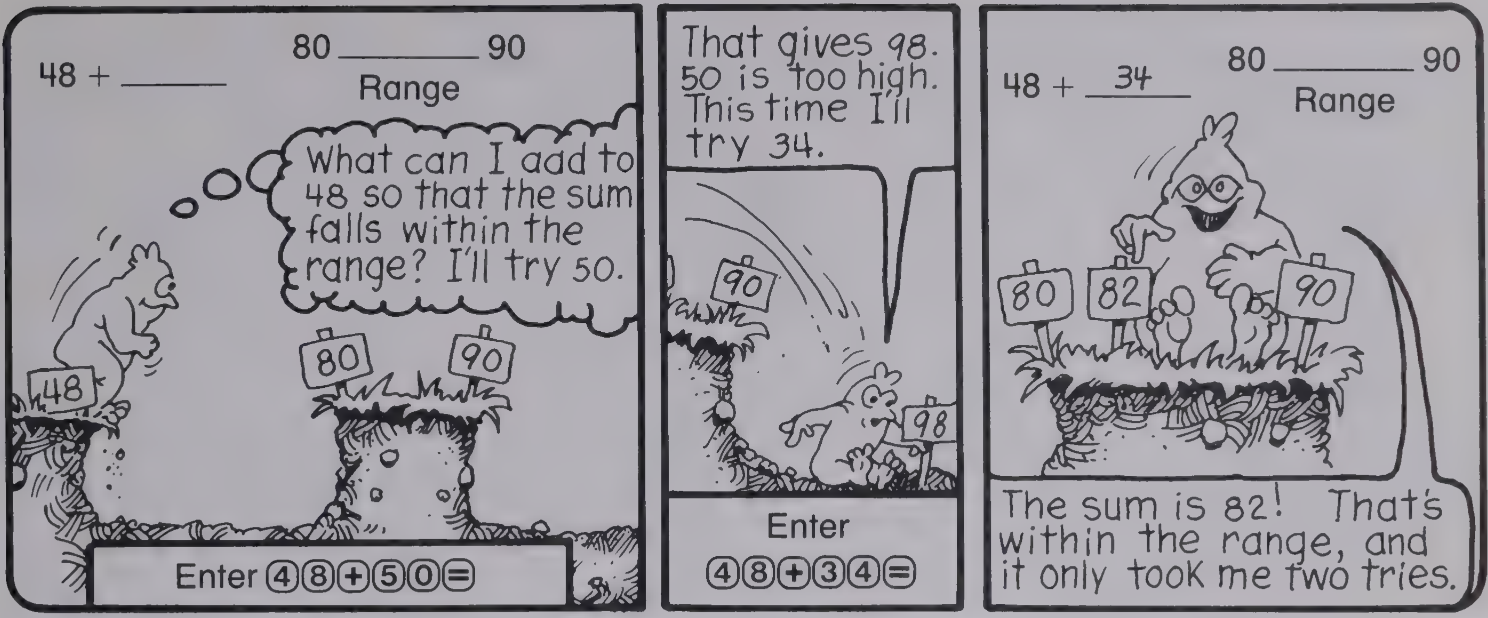
8.



Estimation
Addition

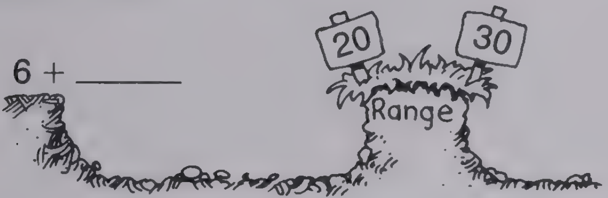
Number Range

Name ______________________


48 + ______
80 ________ 90
Range
What can I add to 48 so that the sum falls within the range? I'll try 50.
48
80
90
Enter ④⑧⊕⑤⓪⊜
That gives 98. 50 is too high. This time I'll try 34.
90
98
Enter
④⑧⊕③④⊜
48 + 34
80 ________ 90
Range
80
82
90
The sum is 82! That's within the range, and it only took me two tries.

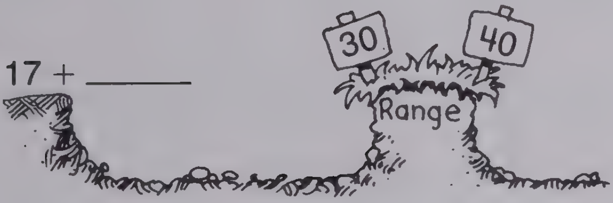
Try these. Use your 🖩 to check your guesses. Be sure to tally the number of tries each time.

1. 6 + ______



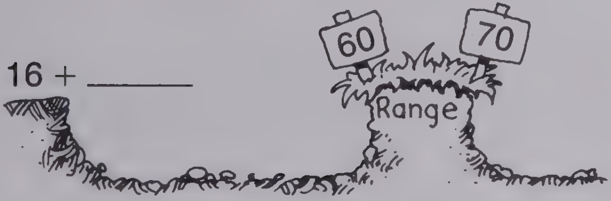
Number of tries: ________

2. 17 + ______



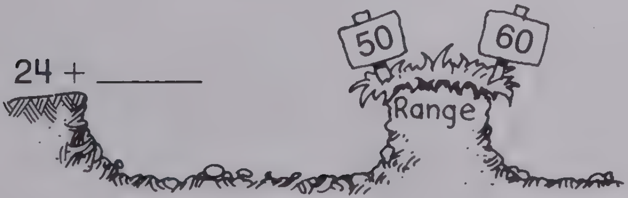
Number of tries: ________

3. 16 + ______



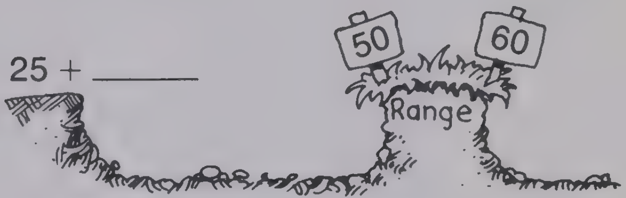
Number of tries: ________

4. 24 + ______



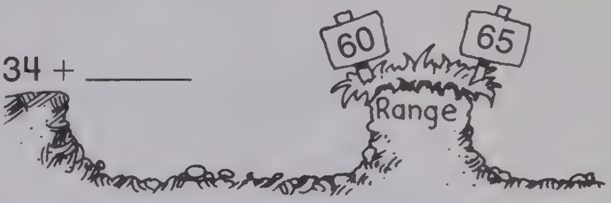
Number of tries: ________

5. 25 + ______



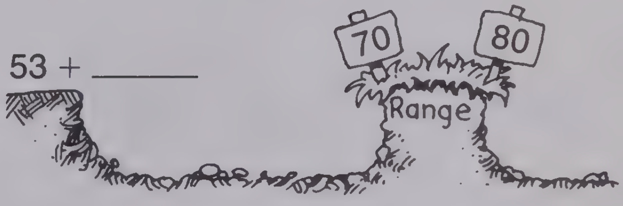
Number of tries: ________

6. 34 + ______



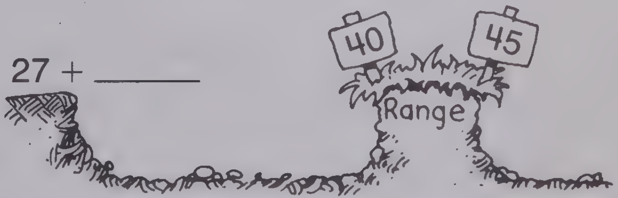
Number of tries: ________

7. 53 + ______



Number of tries: ________

8. 27 + ______



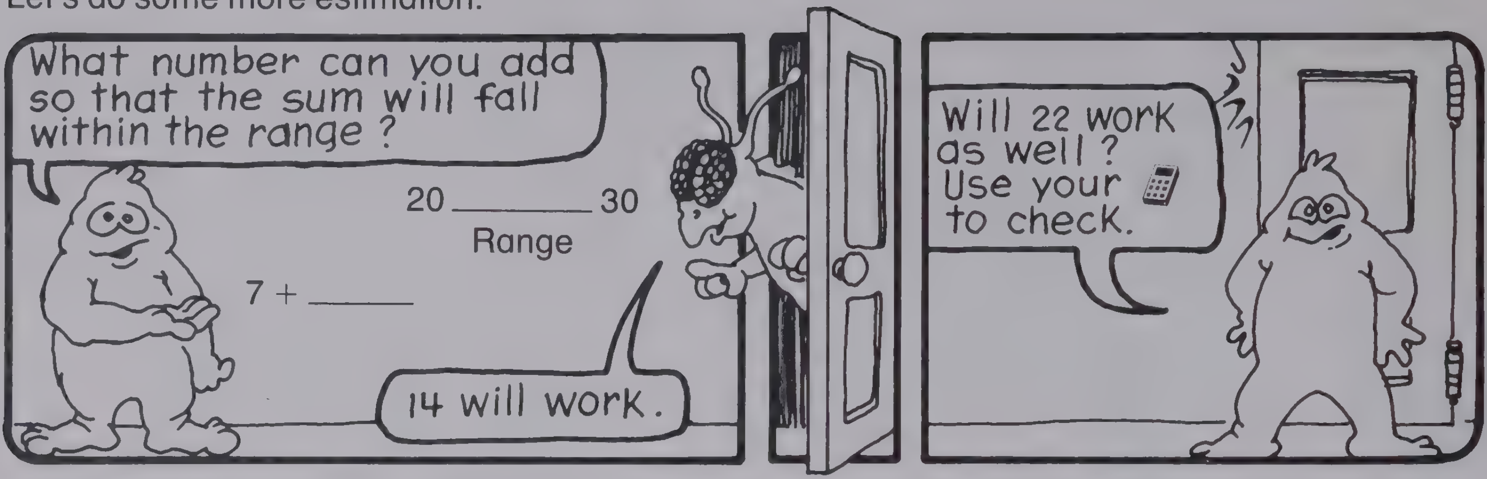
Number of tries: ________

Estimation
Addition

More Arranging

Name ________________________

Let's do some more estimation.


What number can you add so that the sum will fall within the range?
20 ______ 30
Range
7 + ______
14 will work.
Will 22 work as well? Use your 🖩 to check.

Try these. Use your 🖩 to check your guesses. Tally the number of tries each time.

1. 95 ______ 100 Range

35 + ______

Number of tries:________

2. 100 ______ 105 Range

75 + ______

Number of tries:________

3. 120 ______ 125 Range

98 + ______

Number of tries:________

4. 200 ______ 210 Range

106 + ______

Number of tries:________

5. 100 ______ 110 Range

87 + ______

Number of tries:________

6. 120 ______ 125 Range

103 + ______

Number of tries:________

7. 200 ______ 210 Range

175 + ______

Number of tries:________

8. 100 ______ 105 Range

62 + ______

Number of tries:________

9. 90 ______ 100 Range

47 + ______

Number of tries:________

10. 80 ______ 90 Range

51 + ______

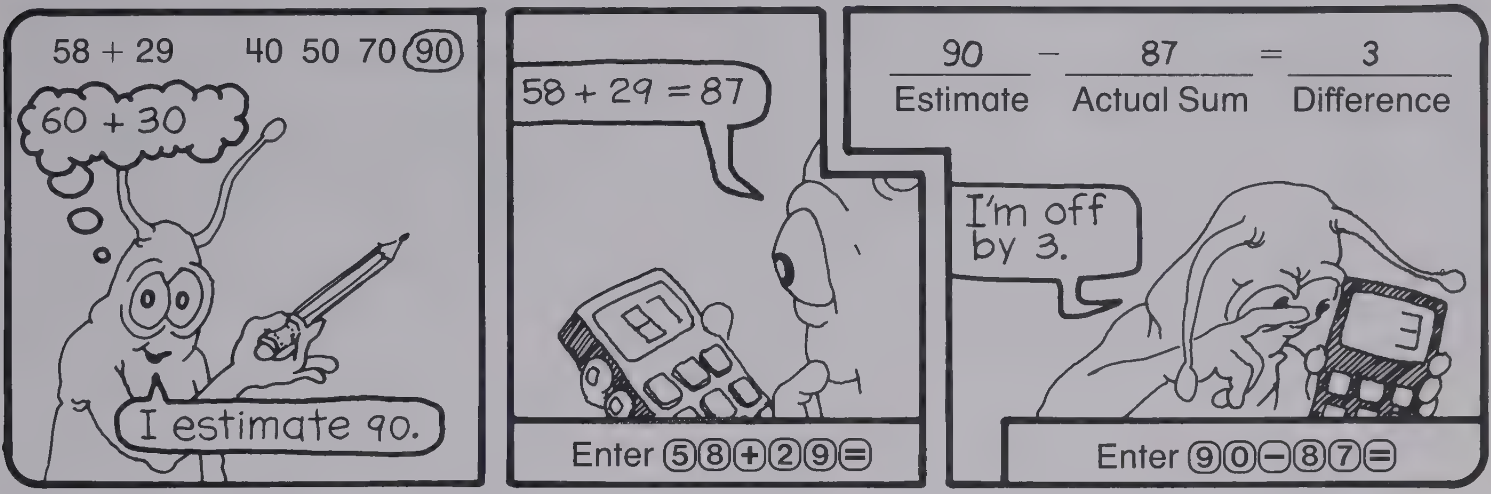
Number of tries:________

Estimation
Addition

What's the Difference?

Name ______________________

Estimate each sum below. Circle the number that is closest to your estimate. Use your 🖩 to find the exact sum, and then subtract to find the difference.



1. 28 + 41 40 70 100 130

_______ − _______ = _______
Estimate Actual Sum Difference

2. 51 + 42 90 110 130 150

_______ − _______ = _______
Estimate Actual Sum Difference

3. 37 + 69 90 110 130 150

_______ − _______ = _______
Estimate Actual Sum Difference

4. 93 + 12 90 100 110 120

_______ − _______ = _______
Estimate Actual Sum Difference

5. 13 + 24 + 69 100 120 140

_______ − _______ = _______
Estimate Actual Sum Difference

6. 49 + 51 + 6 90 110 130

_______ − _______ = _______
Estimate Actual Sum Difference

7. 12 + 43 + 3 40 60 80

_______ − _______ = _______
Estimate Actual Sum Difference

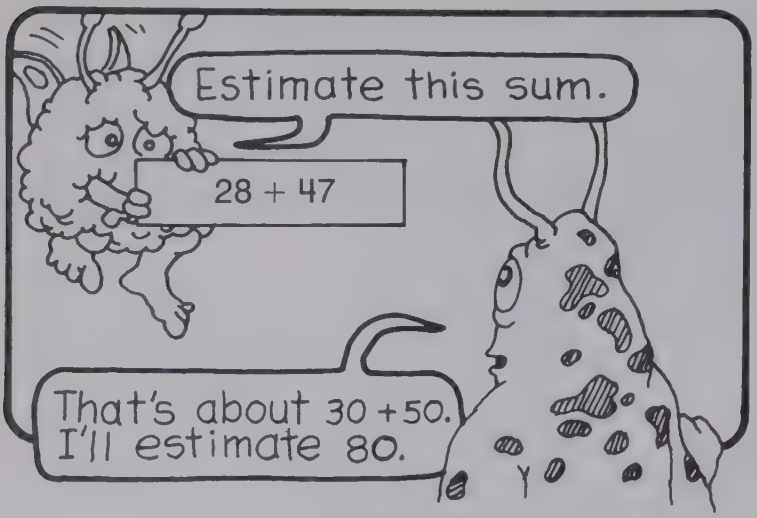
8. 35 + 21 + 17 60 70 90

_______ − _______ = _______
Estimate Actual Sum Difference

Estimation
Addition

How Close?

Name ____________________


Estimate this sum.
28 + 47
That's about 30 + 50. I'll estimate 80.

80 − 75 = 5
Estimate − Actual Sum = Difference

- Write your estimate.
- Use your 🖩 to find the actual sum.
- Subtract the actual sum from your estimate to find the difference.

Try these.

1. 36 + 21

____ − ____ = ____
Estimate − Actual Sum = Difference

2. 38 + 49

____ − ____ = ____
Estimate − Actual Sum = Difference

3. 59 + 32

____ − ____ = ____
Estimate − Actual Sum = Difference

4. 63 + 19

____ − ____ = ____
Estimate − Actual Sum = Difference

5. 72 + 51

____ − ____ = ____
Estimate − Actual Sum = Difference

6. 59 + 84

____ − ____ = ____
Estimate − Actual Sum = Difference

7. 84 + 23

____ − ____ = ____
Estimate − Actual Sum = Difference

8. 18 + 84

____ − ____ = ____
Estimate − Actual Sum = Difference

9. 22 + 38 + 16

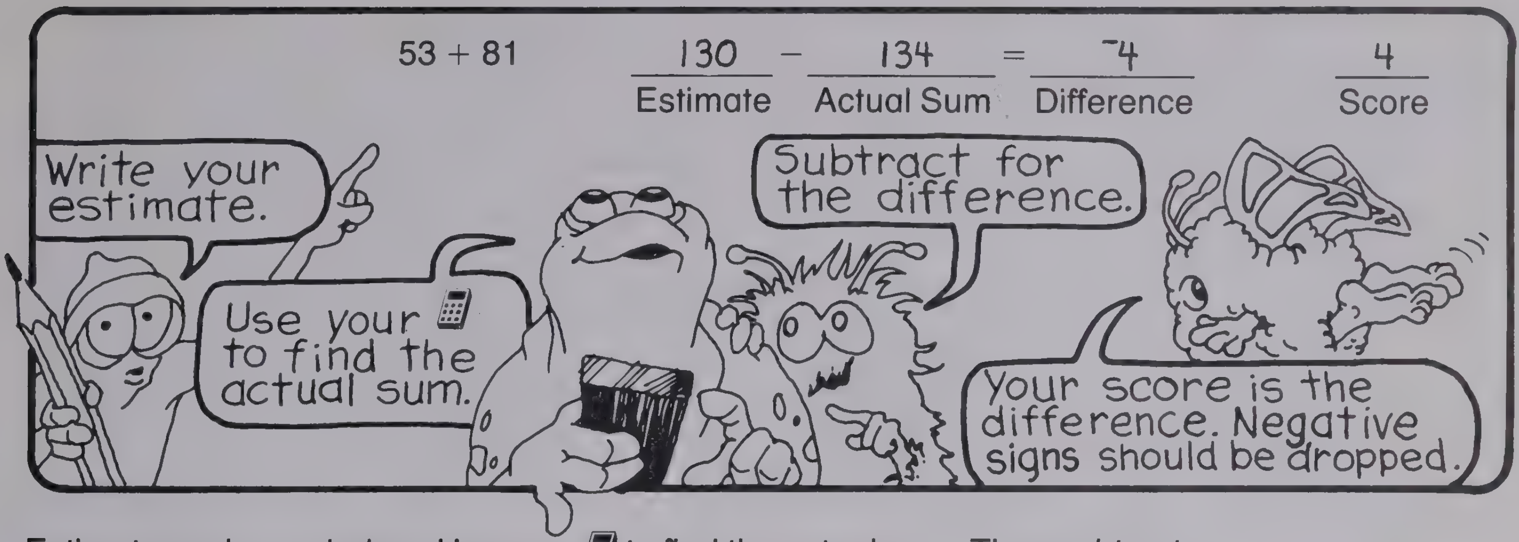
____ − ____ = ____
Estimate − Actual Sum = Difference

10. 41 + 72 + 99

____ − ____ = ____
Estimate − Actual Sum = Difference

Keeping Score

Name ____________________


53 + 81
130 − 134 = ⁻4
Estimate
Actual Sum
Difference
4
Score
Write your estimate.
Use your 🖩 to find the actual sum.
Subtract for the difference.
Your score is the difference. Negative signs should be dropped.

Estimate each sum below. Use your 🖩 to find the actual sum. Then subtract the actual sum from your estimate to find the difference. Remember, a low score is best.

1. 64 + 73 ______ − ______ = ______ ______
Estimate Actual Sum Difference Score

2. 48 + 79 ______ − ______ = ______ ______
Estimate Actual Sum Difference Score

3. 82 + 12 ______ − ______ = ______ ______
Estimate Actual Sum Difference Score

4. 64 + 64 ______ − ______ = ______ ______
Estimate Actual Sum Difference Score

5. 27 + 51 ______ − ______ = ______ ______
Estimate Actual Sum Difference Score

6. 41 + 89 ______ − ______ ______ ______
Estimate Actual Sum Difference Score

7. 12 + 57 + 18 ______ − ______ ______ ______
Estimate Actual Sum Difference Score

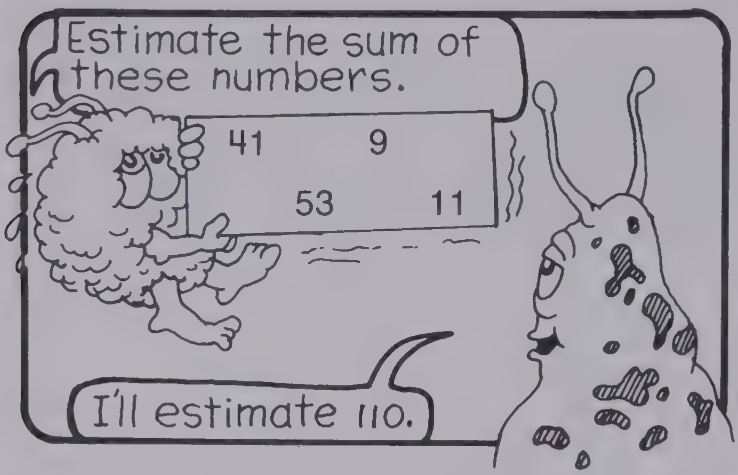
8. 11 + 12 + 41 + 13 ______ − ______ ______ ______
Estimate Actual Sum Difference Score

9. 9 + 99 + 9 + 94 ______ − ______ ______ ______
Estimate Actual Sum Difference Score

Estimation
Addition

Least is Best

Name ______________________


Estimate the sum of these numbers.
41 9
53 11
I'll estimate 110.

110 – 114 = -4 4
Estimate – Actual Sum = Difference Score

- Write your estimate.
- Use your 🖩 to find the actual sum.
- Subtract the actual sum from your estimate.
- Your score is the difference. Negative signs should be dropped.

Try these. Remember, a low score is best.

1. 3 16
14 7

_____ – _____ = _____ _____
Estimate – Actual Sum = Difference Score

2. 37 2
6 14

_____ – _____ = _____ _____
Estimate – Actual Sum = Difference Score

3. 9 9
8 9

_____ – _____ = _____ _____
Estimate – Actual Sum = Difference Score

4. 23 14
6 2

_____ – _____ = _____ _____
Estimate – Actual Sum = Difference Score

5. 18 18
18 18

_____ – _____ = _____ _____
Estimate – Actual Sum = Difference Score

6. 27 27
27 27

_____ – _____ = _____ _____
Estimate – Actual Sum = Difference Score

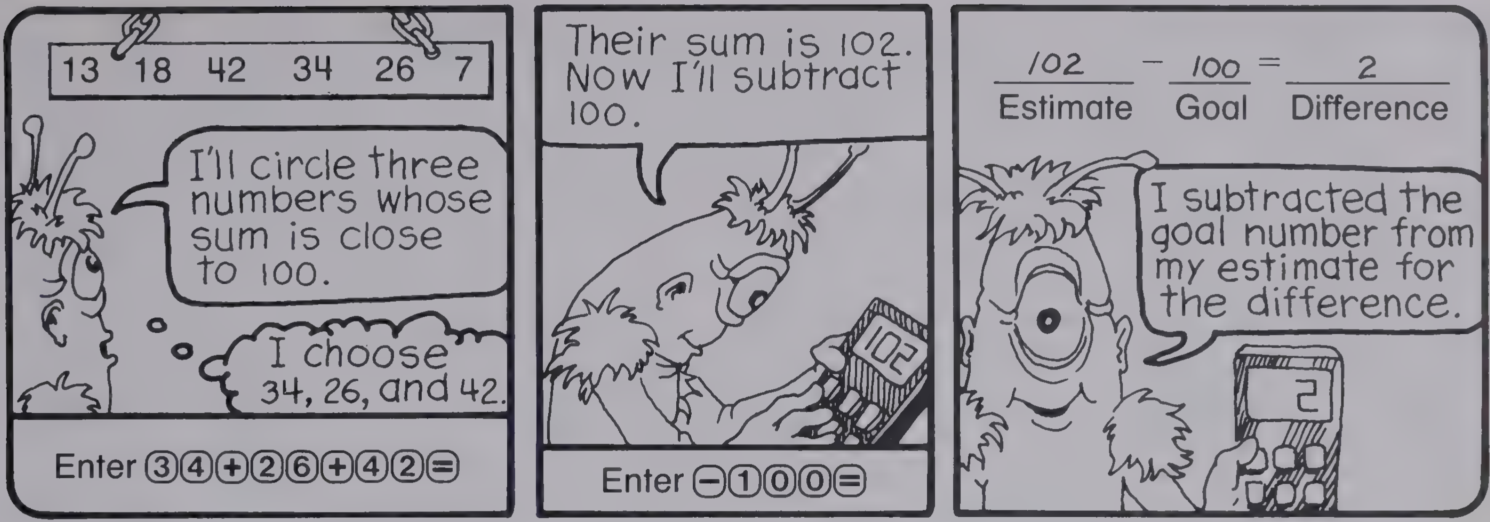
7. 41 42
44 50

_____ – _____ = _____ _____
Estimate – Actual Sum = Difference Score

Estimation
Addition

Three's Enough

Name _______________


13 18 42 34 26 7
I'll circle three numbers whose sum is close to 100.
I choose 34, 26, and 42.
Enter ③④⊕②⑥⊕④②⊜
Their sum is 102. Now I'll subtract 100.
102
Enter ⊖①⓪⓪⊜
102 − 100 = 2
Estimate Goal Difference
I subtracted the goal number from my estimate for the difference.
2

Choose three numbers whose sum is close to 100. Circle your estimate. Use your 🖩 to find the actual sum of the circled numbers. Subtract 100 from the sum to find the difference.

1. 15 16 38 9 11 41

_____ − 100 = _____
Estimate Goal Difference

2. 62 40 15 38 50 17

_____ − 100 = _____
Estimate Goal Difference

3. 12 46 15 52 18 66

_____ − 100 = _____
Estimate Goal Difference

4. 9 74 6 39 49 2

_____ − 100 = _____
Estimate Goal Difference

5. 11 84 43 17 51 9

_____ − 100 = _____
Estimate Goal Difference

6. 82 14 40 9 9 6

_____ − 100 = _____
Estimate Goal Difference

7. 33 11 34 8 17 32

_____ − 100 = _____
Estimate Goal Difference

8. 58 25 13 3 41 88

_____ − 100 = _____
Estimate Goal Difference

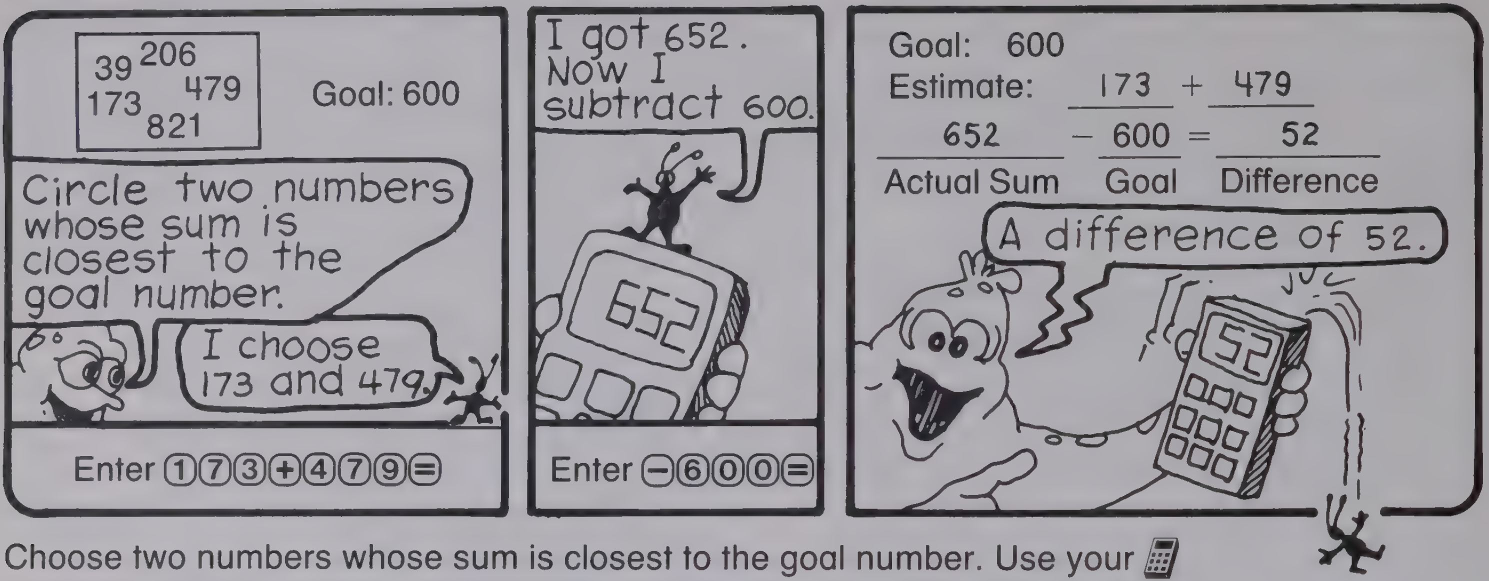
9. 57 37 5 15 47 67

_____ − 100 = _____
Estimate Goal Difference

Estimation
Addition

Fishing for Hundreds

Name ______________________



Choose two numbers whose sum is closest to the goal number. Use your 🖩 to find the actual sum. Then subtract the goal number from the actual sum to find the difference.

1. 231 163 108 97   Goal: 400

Estimate: ______ + ______

__________ − 400 = __________
Actual Sum Goal Difference

2. 306 224 117 88   Goal: 400

Estimate: ______ + ______

__________ − 400 = __________
Actual Sum Goal Difference

3. 106 150 41 287 198   Goal: 300

Estimate: ______ + ______

__________ − 300 = __________
Actual Sum Goal Difference

4. 179 519 257 63 407   Goal: 700

Estimate: ______ + ______

__________ − 700 = __________
Actual Sum Goal Difference

5. 498 153 32 86 277   Goal: 800

Estimate: ______ + ______

__________ − 800 = __________
Actual Sum Goal Difference

6. 199 261 387 471 87   Goal: 600

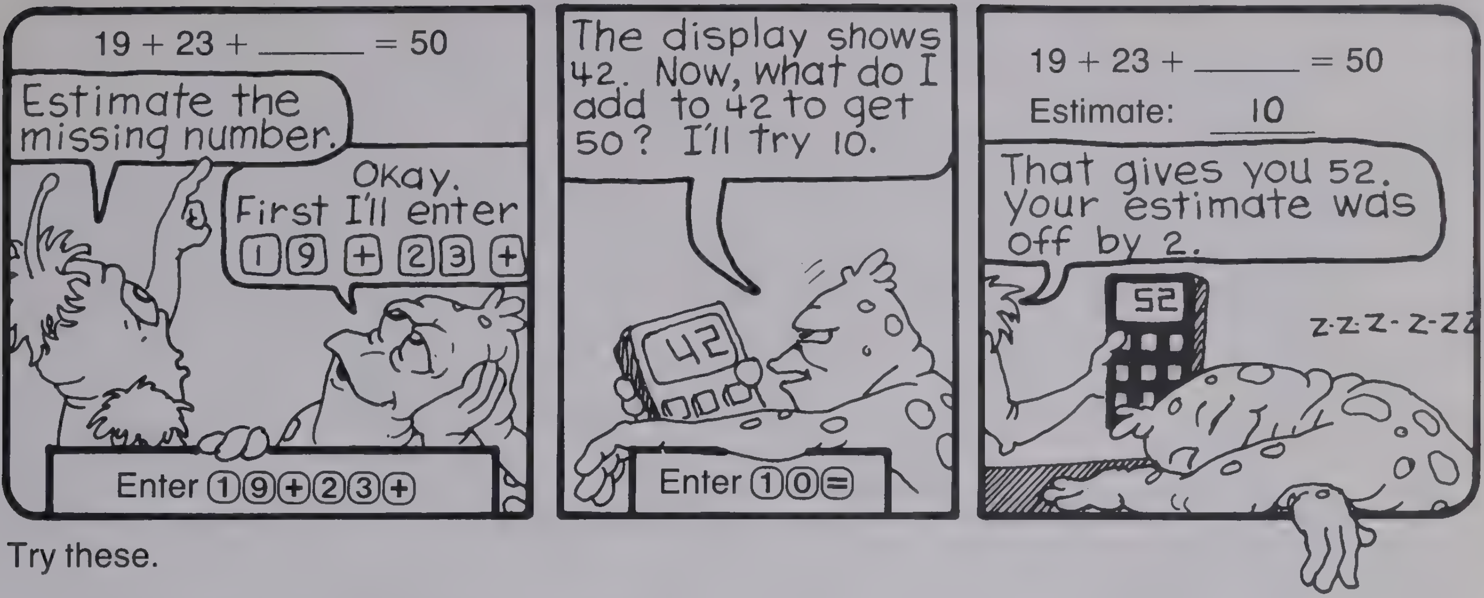
Estimate: ______ + ______

__________ − 600 = __________
Actual Sum Goal Difference

Estimation
Addition

That's Close

Name ____________________


19 + 23 + ______ = 50
Estimate the missing number.
Okay. First I'll enter ①⑨⊕②③⊕
Enter ①⑨⊕②③⊕
The display shows 42. Now, what do I add to 42 to get 50? I'll try 10.
42
Enter ①⓪⊜
19 + 23 + ______ = 50
Estimate: 10
That gives you 52. Your estimate was off by 2.
52
z-z-z-z-zz

Try these.

- Enter: first number ⊕ second number ⊕ .
- Look at the number in the display.
- Estimate the missing addend and record that number.
- Check the display. Is your estimate close?

1. 29 + 34 + ______ = 70

Estimate: ______

2. 54 + 35 + ______ = 100

Estimate: ______

3. 17 + 62 + ______ = 95

Estimate: ______

4. 48 + 70 + ______ = 125

Estimate: ______

5. 22 + 51 + ______ = 80

Estimate: ______

6. 7 + 39 + ______ = 50

Estimate: ______

7. 11 + 84 + ______ = 100

Estimate: ______

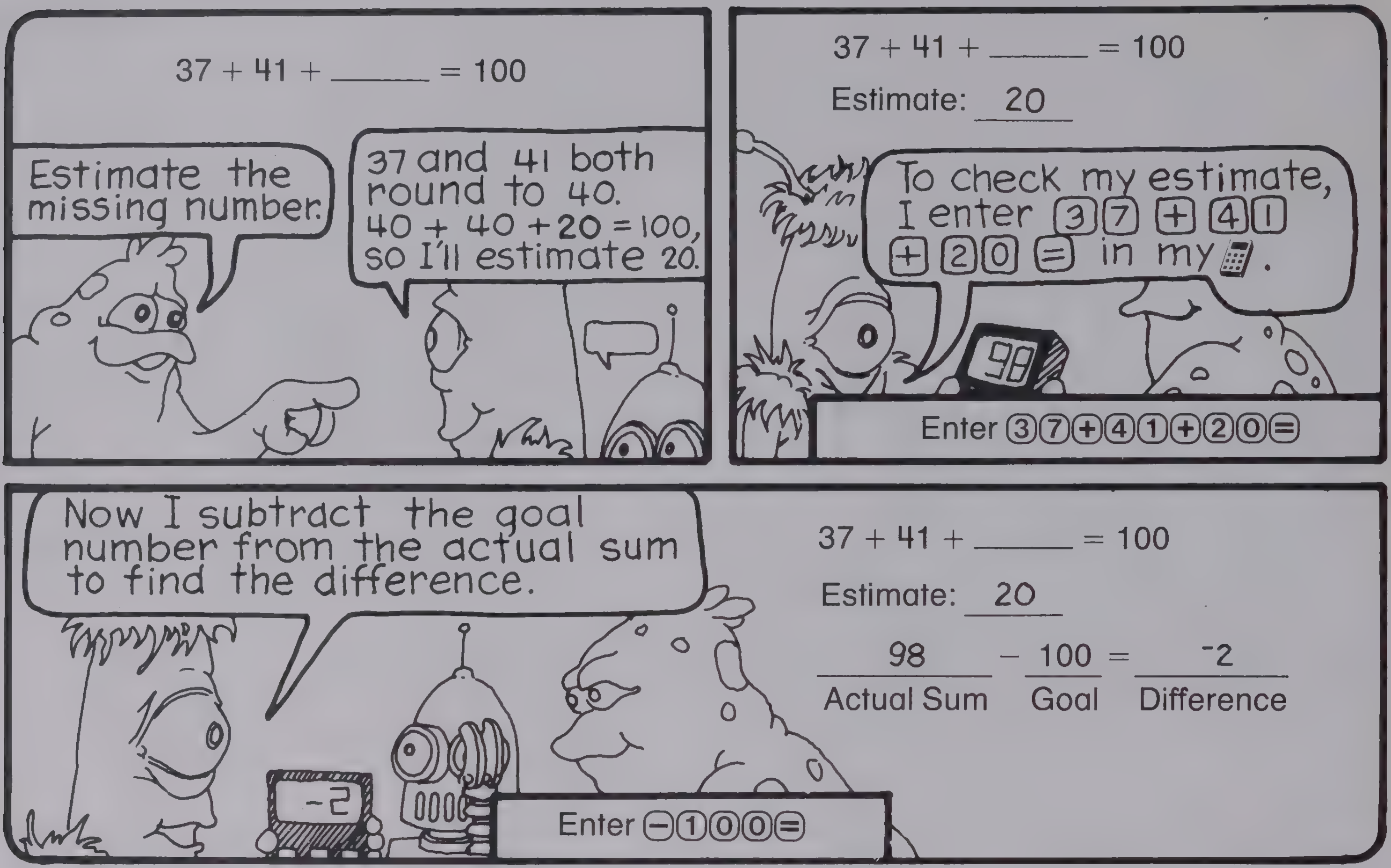
8. 43 + 64 + ______ = 110

Estimate: ______

Estimation
Addition

Hundreds Goal

Name ______________________


37 + 41 + ______ = 100
Estimate the missing number.
37 and 41 both round to 40. 40 + 40 + 20 = 100, so I'll estimate 20.
37 + 41 + ______ = 100
Estimate: 20
To check my estimate, I enter 3 7 + 4 1 + 2 0 = in my 🖩.
98
Enter 3 7 + 4 1 + 2 0 =
Now I subtract the goal number from the actual sum to find the difference.
−2
0000
Enter − 1 0 0 =
37 + 41 + ______ = 100
Estimate: 20
98 − 100 = ⁻2
Actual Sum
Goal
Difference

Try these.

1. 24 + 62 + ______ = 100

Estimate: ______

______ − 100 = ______
Actual Sum Goal Difference

2. 17 + 49 + ______ = 100

Estimate: ______

______ − 100 = ______
Actual Sum Goal Difference

3. 52 + 14 + ______ = 100

Estimate: ______

______ − 100 = ______
Actual Sum Goal Difference

4. 7 + 52 + ______ = 100

Estimate: ______

______ − 100 = ______
Actual Sum Goal Difference

5. 24 + 32 + ______ = 100

Estimate: ______

______ − 100 = ______
Actual Sum Goal Difference

6. 27 + 37 + ______ = 100

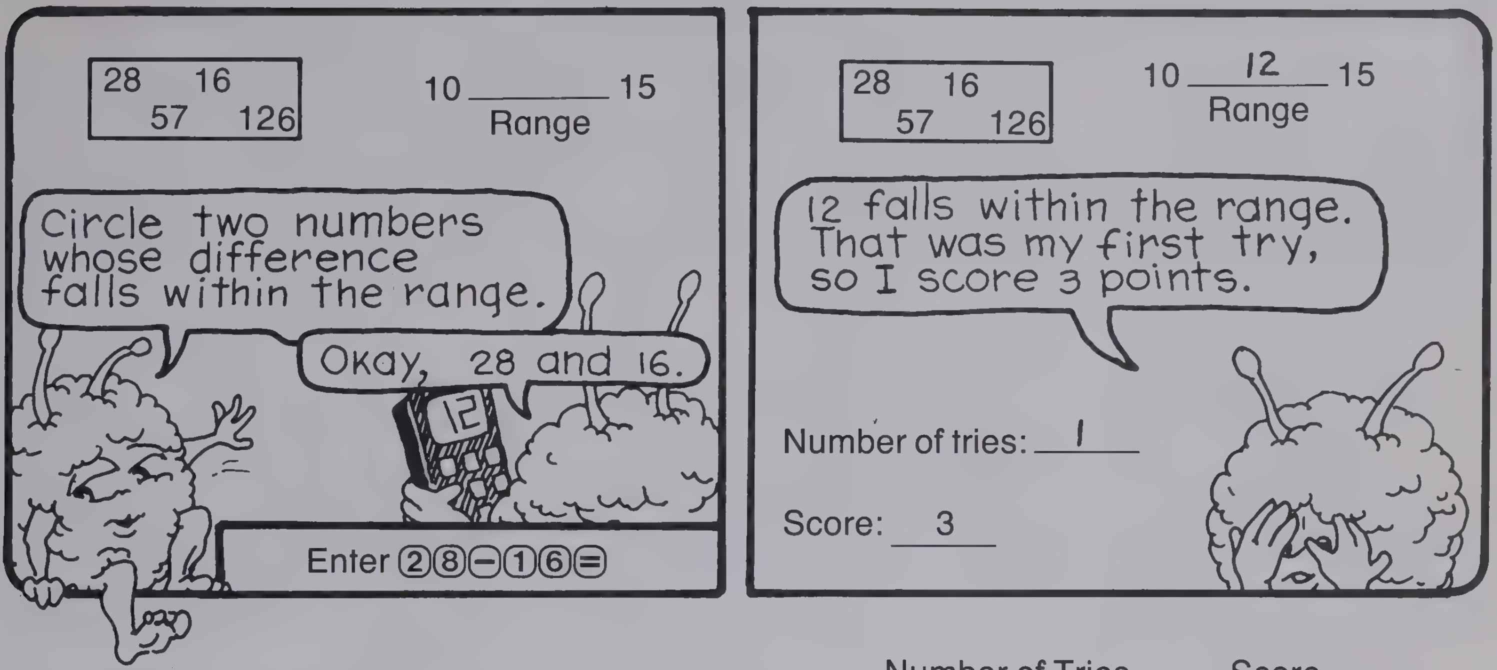
Estimate: ______

______ − 100 = ______
Actual Sum Goal Difference

Estimation
Subtraction

Fishing for Differences

Name ____________________


28 16
57 126
10 ______ 15
Range
Circle two numbers whose difference falls within the range.
Okay, 28 and 16.
12
Enter ②⑧⊖①⑥⊜
28 16
57 126
10 12 15
Range
12 falls within the range. That was my first try, so I score 3 points.
Number of tries: 1
Score: 3

Complete the following problems. Compute your score for each according to this chart. →

Number of Tries	Score
1	3
2	2
3	1

1.
80
41 13

10 ______ 50
Range

Number of tries: ______

Score: ______

2.
14 53
46 67

10 ______ 50
Range

Number of tries: ______

Score: ______

3.
100 27
71 46

10 ______ 50
Range

Number of tries: ______

Score: ______

4.
19 87
69 120

10 ______ 25
Range

Number of tries: ______

Score: ______

5.
19 77
53 150

10 ______ 25
Range

Number of tries: ______

Score: ______

6.
14 53
45 67

10 ______ 25
Range

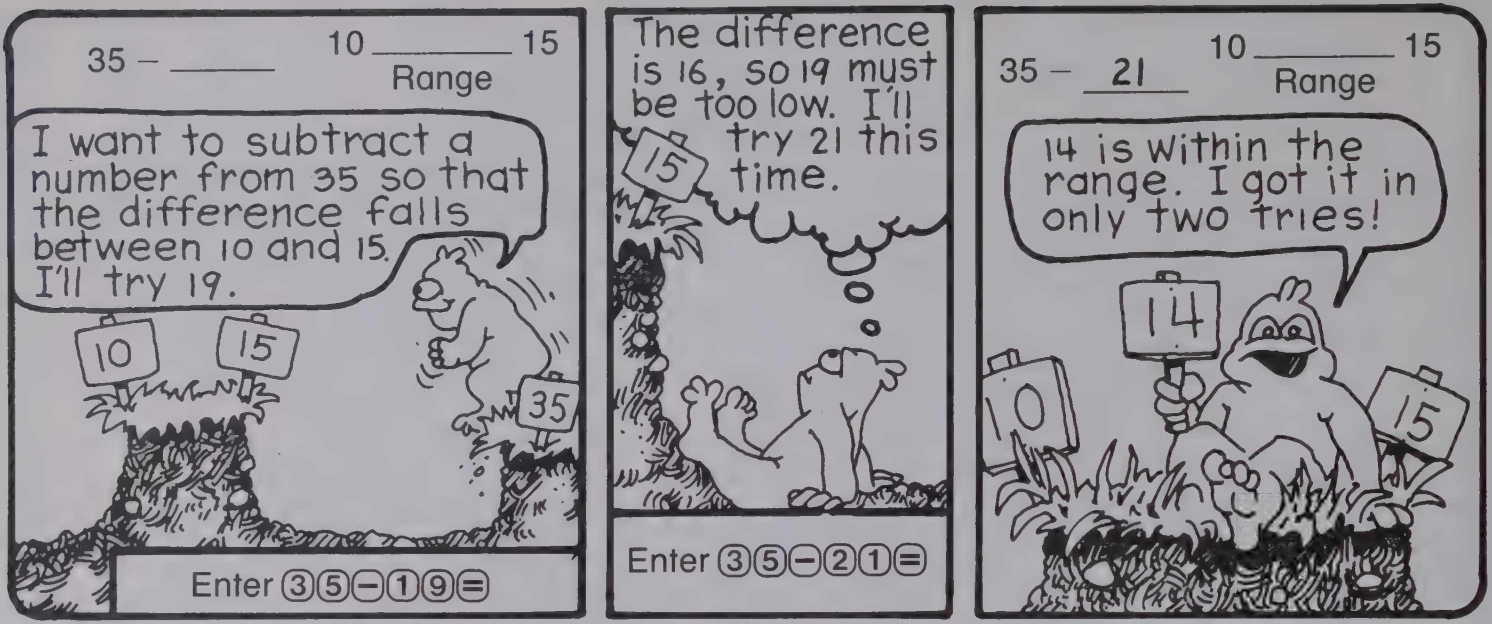
Number of tries: ______

Score: ______

Estimation
Subtraction

Range of Differences

Name ____________________


35 – ______
10 ______ 15
Range
I want to subtract a number from 35 so that the difference falls between 10 and 15. I'll try 19.
10
15
35
Enter ③⑤⊖①⑨⊜
The difference is 16, so 19 must be too low. I'll try 21 this time.
15
Enter ③⑤⊖②①⊜
35 – 21
10 ______ 15
Range
14 is within the range. I got it in only two tries!
14
10
15

Try these. Use your 🖩 to check your guesses. Be sure to tally the number of tries each time.

1. 20 – ______ 8 ______ 12 Range
Number of tries: ______

2. 45 – ______ 5 ______ 10 Range
Number of tries: ______

3. 98 – ______ 40 ______ 45 Range
Number of tries: ______

4. 40 – ______ 10 ______ 15 Range
Number of tries: ______

5. 100 – ______ 20 ______ 25 Range
Number of tries: ______

6. 47 – ______ 15 ______ 19 Range
Number of tries: ______

7. 83 – ______ 50 ______ 55 Range
Number of tries: ______

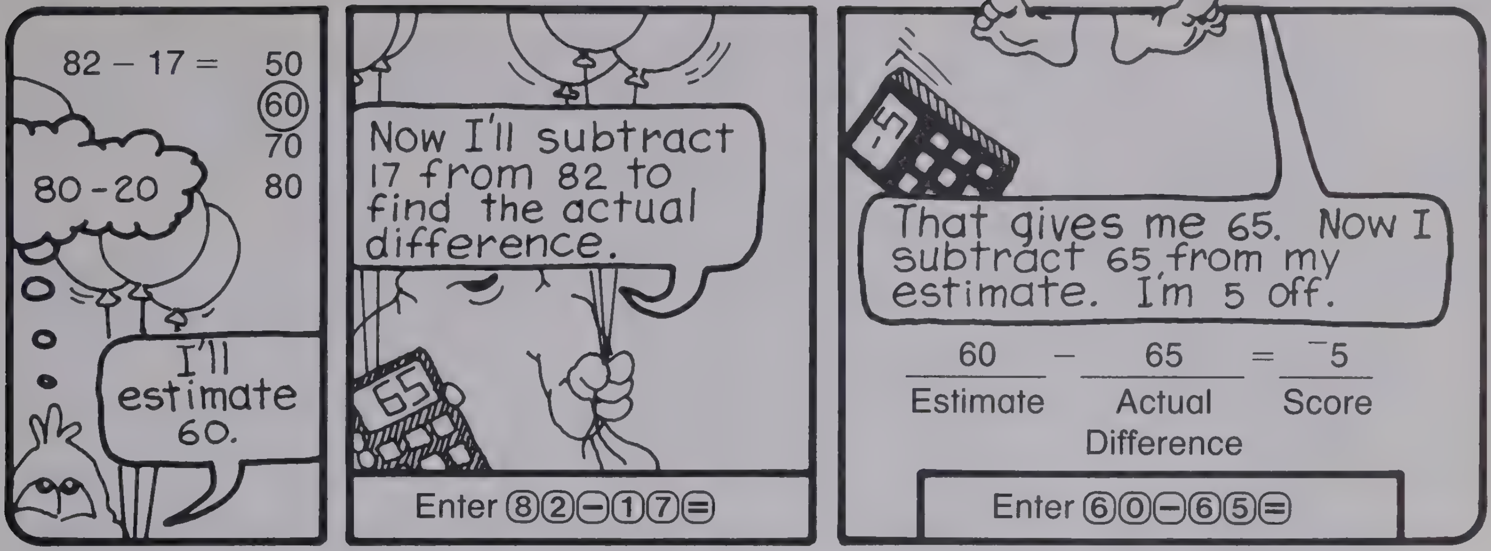
8. 106 – ______ 10 ______ 15 Range
Number of tries: ______

9. 120 – ______ 95 ______ 99 Range
Number of tries: ______

10. 110 – ______ 80 ______ 85 Range
Number of tries: ______

Close Score

Name ______________________


82 − 17 =
50
60
70
80
80 - 20
I'll estimate 60.
Now I'll subtract 17 from 82 to find the actual difference.
65
Enter ⑧②⊖①⑦⊜
-5
That gives me 65. Now I subtract 65 from my estimate. I'm 5 off.
60 − 65 = ⁻5
Estimate
Actual Difference
Score
Enter ⑥⓪⊖⑥⑤⊜

Estimate each difference. Then circle the number that is closest to your estimate.
Use your 🖩 to find the actual difference and your score.
The closer your score is to 0, the better!

1. 91 − 38 =
30
40
50
60

_______ − _______ = _______
Estimate Actual Difference Score

2. 74 − 29 =
30
40
50
60

_______ − _______ = _______
Estimate Actual Difference Score

3. 81 − 16 =
30
40
50
60

_______ − _______ = _______
Estimate Actual Difference Score

4. 63 − 34 =
30
40
50
60

_______ − _______ = _______
Estimate Actual Difference Score

5. 91 − 13 =
60
70
80
90

_______ − _______ = _______
Estimate Actual Difference Score

6. 53 − 9 =
30
40
50
60

_______ − _______ = _______
Estimate Actual Difference Score

7. 58 − 39 =
20
30
40
50

_______ − _______ = _______
Estimate Actual Difference Score

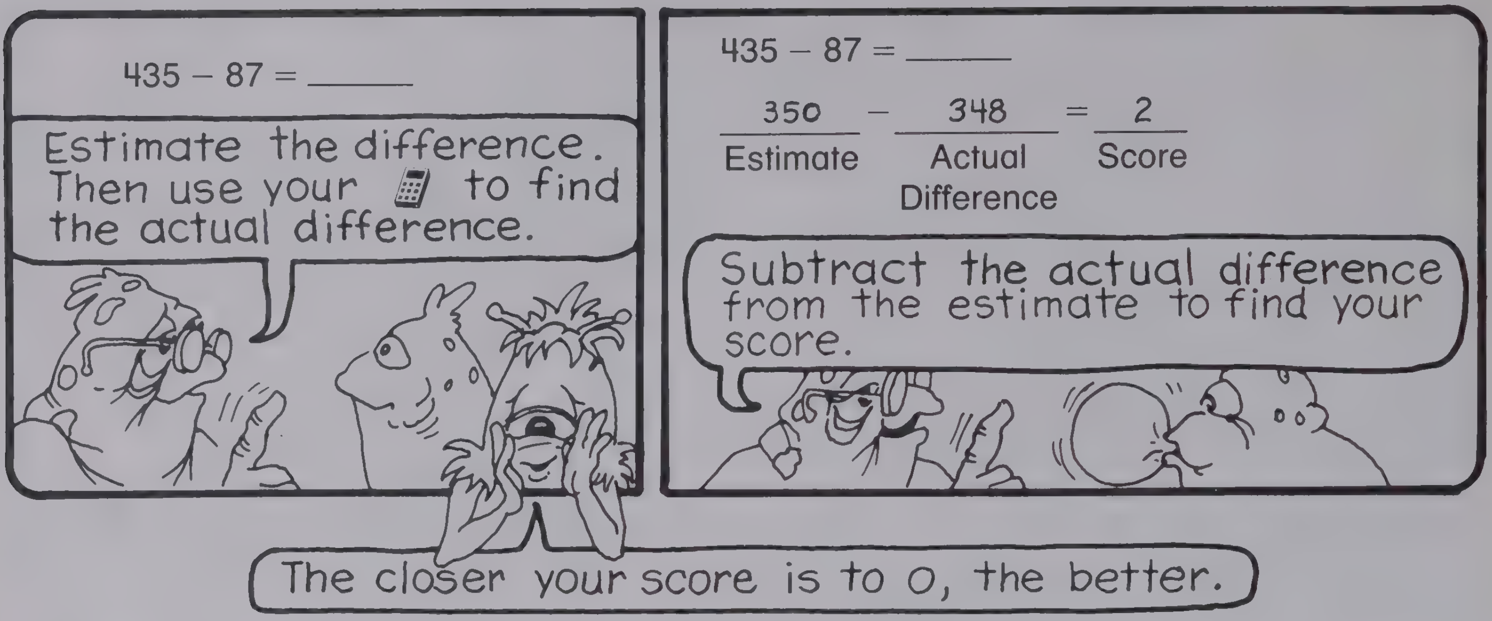
8. 80 − 34 =
20
30
40
50

_______ − _______ = _______
Estimate Actual Difference Score

Estimation
Subtraction

Close Call

Name ____________________


435 − 87 = ______
Estimate the difference. Then use your 🖩 to find the actual difference.
435 − 87 = ______
350 − 348 = 2
Estimate
Actual Difference
Score
Subtract the actual difference from the estimate to find your score.
The closer your score is to 0, the better.

Try these.

1. 702 − 69

______ − ______ = ______
Estimate Actual Difference Score

2. 501 − 78

______ − ______ = ______
Estimate Actual Difference Score

3. 437 − 49

______ − ______ = ______
Estimate Actual Difference Score

4. 555 − 87

______ − ______ = ______
Estimate Actual Difference Score

5. 307 − 39

______ − ______ = ______
Estimate Actual Difference Score

6. 842 − 277 =

______ − ______ = ______
Estimate Actual Difference Score

7. 705 − 246

______ − ______ = ______
Estimate Actual Difference Score

8. 517 − 398

______ − ______ = ______
Estimate Actual Difference Score

9. 622 − 377

______ − ______ = ______
Estimate Actual Difference Score

10. 981 − 432

______ − ______ = ______
Estimate Actual Difference Score

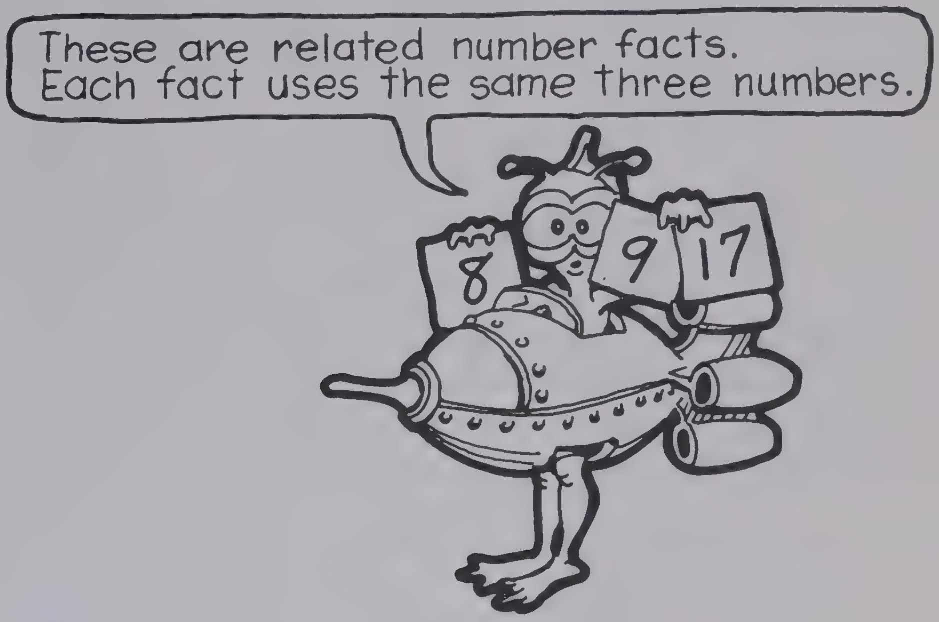
Related Number Facts
Patterns

Fact Families

Name ______________________

Use your 🖩 to find the first fact in each row below. Then try to complete the remaining facts before checking on your 🖩 .

9 + 8 = 17
8 + 9 = 17
17 − 8 = 9
17 − 9 = 8


These are related number facts. Each fact uses the same three numbers.
8
9
17

1. 18 + 9 = ____ 9 + 18 = ____ 27 − 9 = ____ 27 − 18 = ____

2. 35 + 18 = ____ 53 − 18 = ____ 18 + 35 = ____ 53 − 35 = ____

3. 86 − 40 = ____ 86 − ____ = 40 40 + ____ = 86 ____ + 40 = 86

4. 100 − 63 = ____ 100 − ____ = 63 63 + ____ = 100 37 + 63 = ____

5. 18 + ____ = 82 ____ + 18 = 82 82 − 64 = ____ ____ − 18 = 64

6. 99 + 49 = ____ 148 − 49 = ____ 49 + 99 = ____ 148 − ____ = 49

7. 201 + 199 = ____ 199 + ____ = 400 ____ − 199 = 201 ____ − 201 = 199

8. Make your own related number fact.

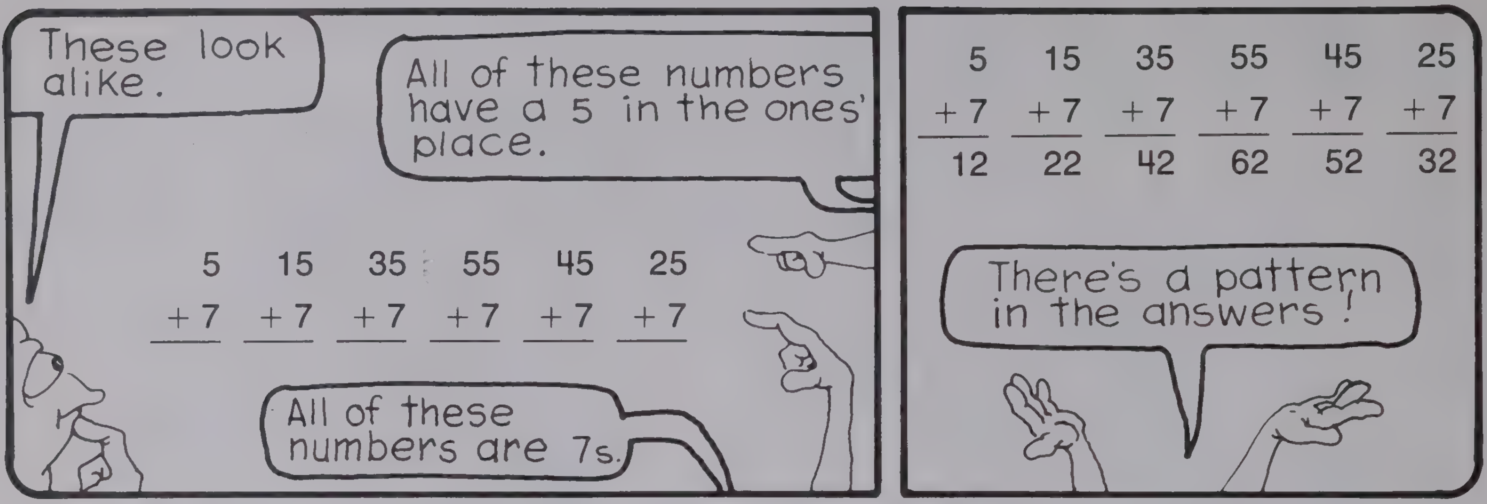
△ + □ = 60 60 − □ = △

60 − △ = □ □ + △ = 60

Addition by Endings
Basic Facts
Patterns

Pattern Search

Name ____________________


These look alike.
All of these numbers have a 5 in the ones' place.
5 15 35 55 45 25
+ 7 + 7 + 7 + 7 + 7 + 7
All of these numbers are 7s.
5 15 35 55 45 25
+ 7 + 7 + 7 + 7 + 7 + 7
12 22 42 62 52 32
There's a pattern in the answers!

Use your 🖩 to solve the following problems. If you see a pattern, try to guess the remaining answers in that row. Then check your guesses on your 🖩.

1. Enter ⊕②⊜, then ⑧⊜, ①⑧⊜, and so on.

8	18	28	38	48	58	68	78	88	98
+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2	+ 2

Remember, a number has been skipped here.

2. Enter ⊕⑨⊜

8	18	28	38	48	58	68	78	98	108
+ 9	+ 9	+ 9	+ 9	+ 9	+ 9	+ 9	+ 9	+ 9	+ 9

3. Enter ⊕④⊜

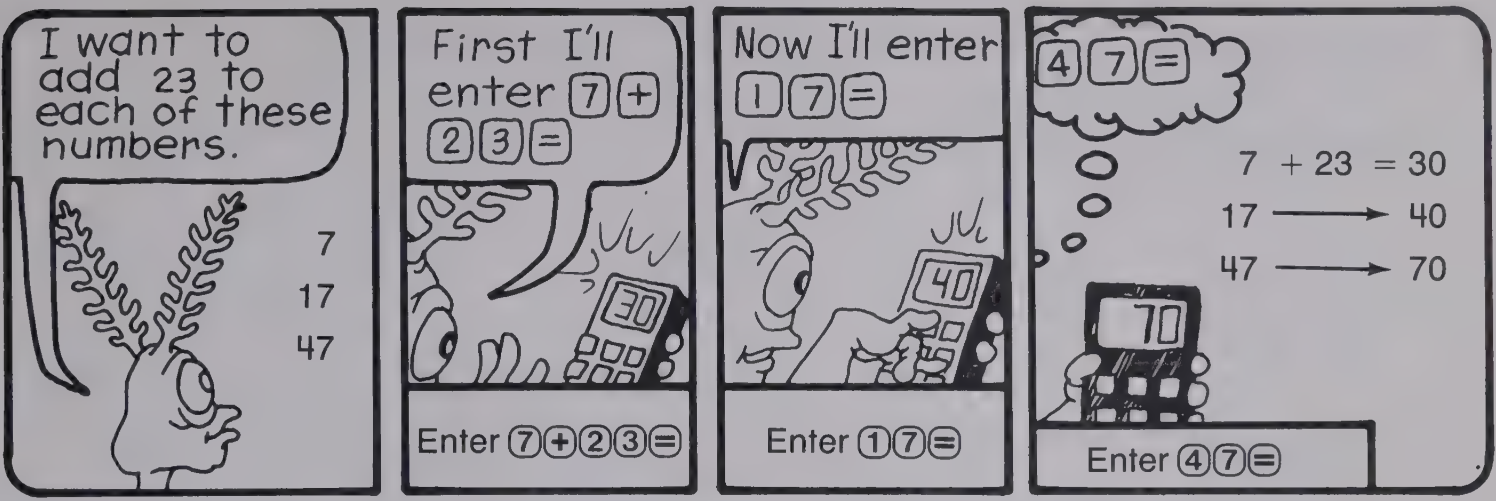
7	17	47	67	27	37	57	97	87	107
+ 4	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4

4. Enter ⊕⑥⊜

11	31	81	101	91	51	21	41	61	71
+ 6	+ 6	+ 6	+ 6	+ 6	+ 6	+ 6	+ 6	+ 6	+ 6

Key Patterns

Name ______________________

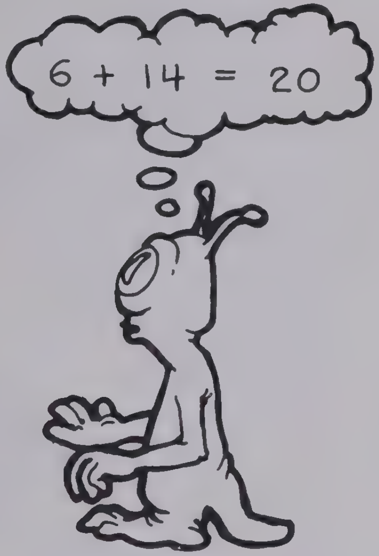


Try these. If you see a pattern, try to guess the remaining answers in that column. Then check your guesses on your 🖩 .

Add 14 to each number.

Enter ⑥⊕①④⊜

6 → ___
36 → ___
76 → ___
26 → ___
16 → ___
46 → ___
86 → ___
56 → ___



Add 42 to each number.

Enter ⑧⊕④②⊜

8 → ___
38 → ___
28 → ___
68 → ___
18 → ___
48 → ___
88 → ___
58 → ___

Add 25 to each number.

Enter ⑤⊕②⑤⊜

5 → ___
15 → ___
45 → ___
25 → ___
85 → ___
65 → ___
35 → ___
75 → ___

Add 16 to each number.

Enter ①④⊕①⑥⊜

14 → ___
74 → ___
64 → ___
24 → ___
54 → ___
94 → ___
34 → ___
44 → ___

Estimation
Patterns

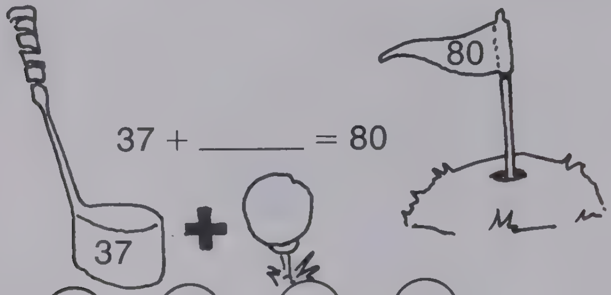
Tap It In

Name ____________________ ✓

Choose the ball that correctly completes each equation below. If you pick the right ball, you score a hole in one.

Use your 🖩 to check your answers.

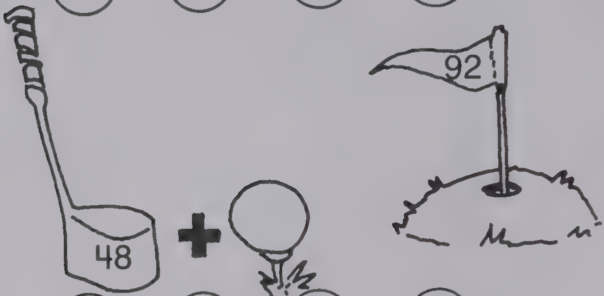
1.



37 + ______ = 80

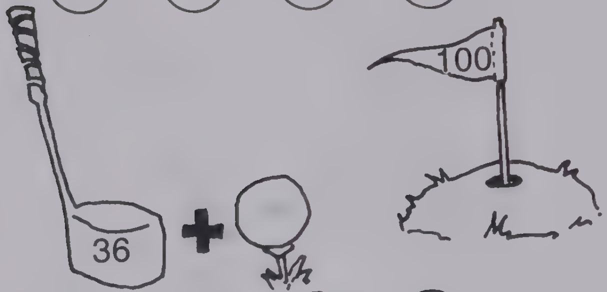
23 33 43 53

2.



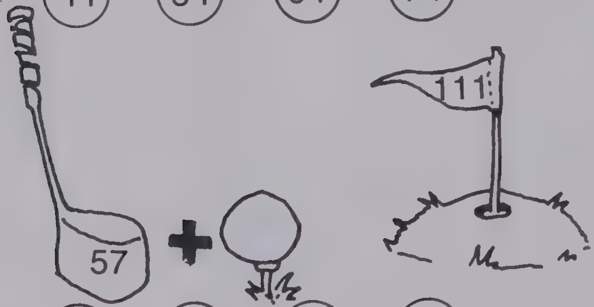
34 44 54 64

3.



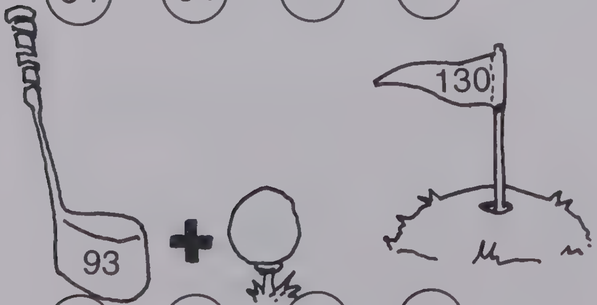
44 54 64 74

4.



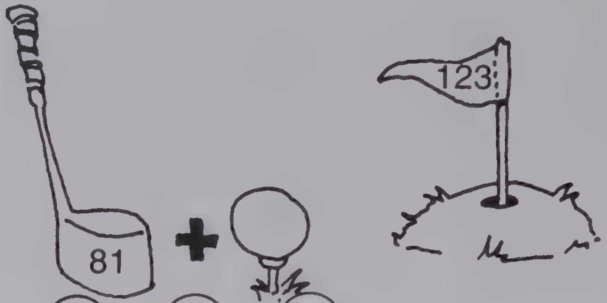
34 54 64 84

5.



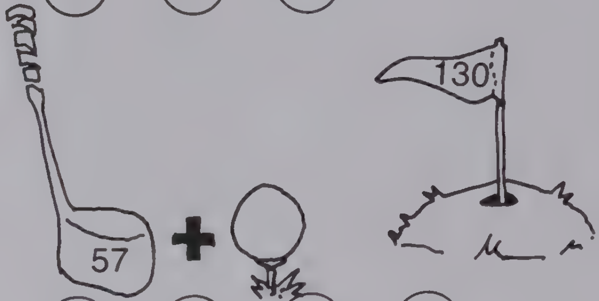
47 37 48 57

6.



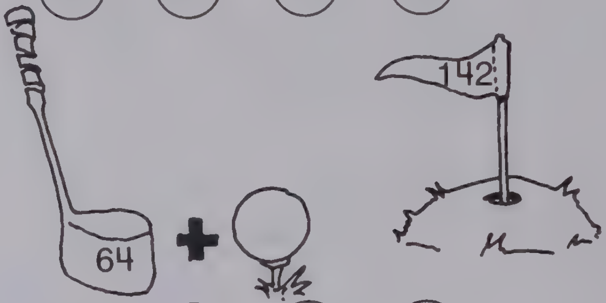
42 52 62

7.



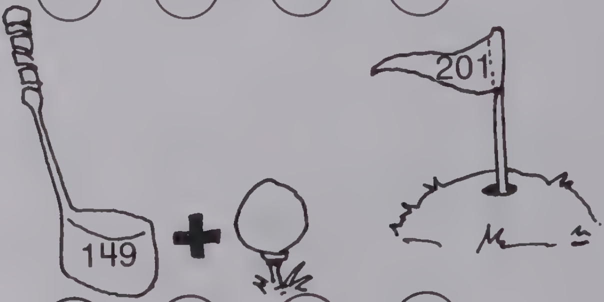
53 63 73 83

8.



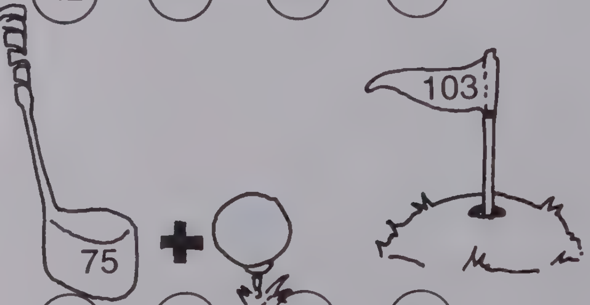
68 72 78 82

9.



42 52 58 68

10.



28 38 32 42

Estimation
Addition
Patterns

Pair 'Em Up

✓

Name ______________________

Circle two numbers whose sum equals the given number. Use your 🖩 to check your estimate.

1. 68

34 21
37
31 44

2. 104

72 38
62 67
37 52

3. 92

56 46
36
26 66

4. 107

28 38
89
88 18

5. 46

9 29 38
27 16
36 11 8

6. 101

7 4 64
27 37
34 54

7. 63

54 44
29 14
19 39

8. 103

56 37
47 67
46 36

9. 86

32 22
54 44
33 43

10. 72

35 21
41 37
47 15

Addition
Estimation

Sum Board

Name ____________________

Number of Players: 2
Materials: 🖩 🖩 ,8 markers each (two different colors)
Object of Game: To have 4 markers in a row in any direction

[illegible]

Game 1

103
9
6
19
55
37
81

122	25	118	100
43	136	74	184
158	109	87	140
61	56	92	15

Game 2

For this game, you must have 5 markers in a row to win.

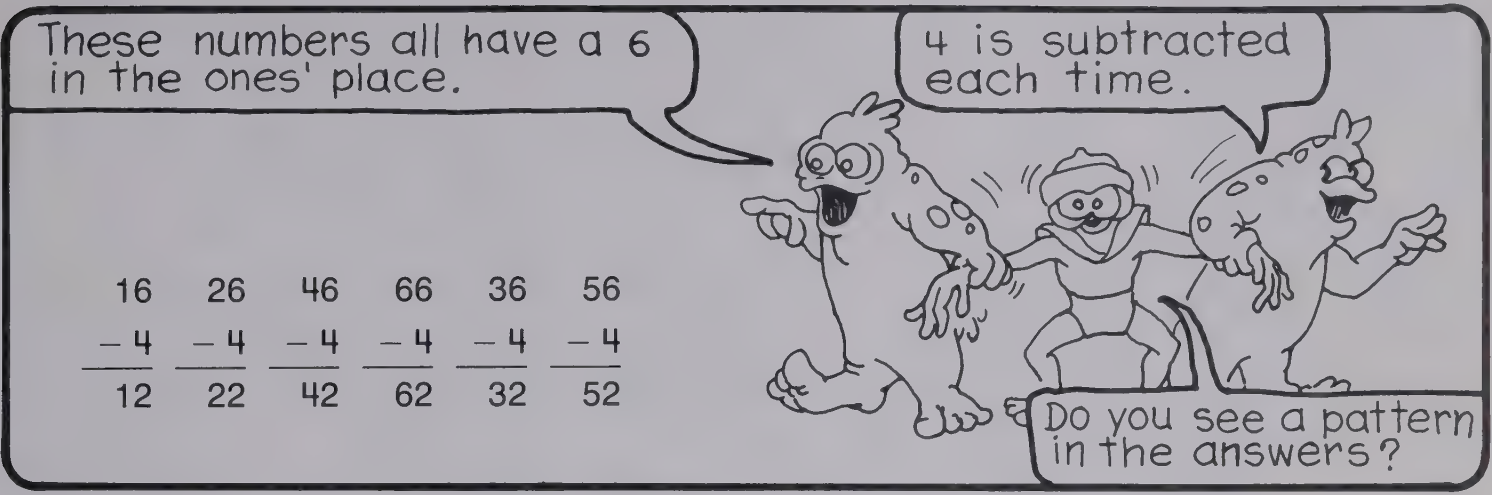
98
74
62
50
46
3
7
143

96	124	53	69	10
144	160	105	101	65
146	241	193	53	81
108	150	189	148	77
217	49	205	172	57

Basic Facts
Subtraction by Endings
Patterns

It's in the Pattern

Name ____________________


These numbers all have a 6 in the ones' place.
4 is subtracted each time.
Do you see a pattern in the answers?

16	26	46	66	36	56
− 4	− 4	− 4	− 4	− 4	− 4
12	22	42	62	32	52

Use your 🖩 to solve the following problems. If you see a pattern, try to guess the remaining answers in that row. Use your 🖩 to check your guesses.

1. Enter ⊖②⊜, then ①⑧⊜, ②⑧⊜, and so on.

18	28	48	38	68	58	98	78	88	108
− 2	− 2	− 2	− 2	− 2	− 2	− 2	− 2	− 2	− 2

2. Enter ⊖⑨⊜

18	28	68	38	58	48	78	98	88	108
− 9	− 9	− 9	− 9	− 9	− 9	− 9	− 9	− 9	− 9

3. Enter ⊖⑤⊜

7	47	77	37	27	67	17	57	87	97
− 5	− 5	− 5	− 5	− 5	− 5	− 5	− 5	− 5	− 5

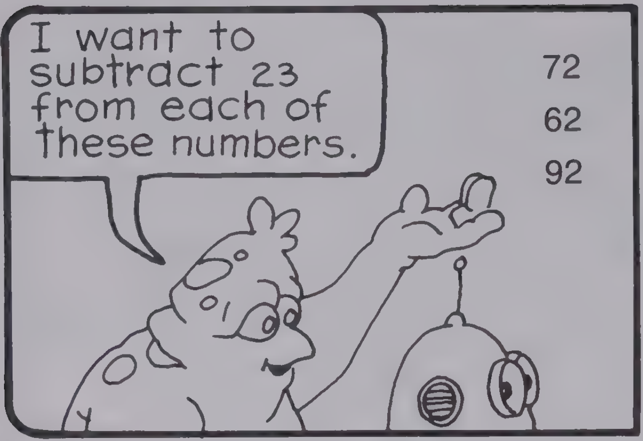
4. Enter ⊖⑨⊜

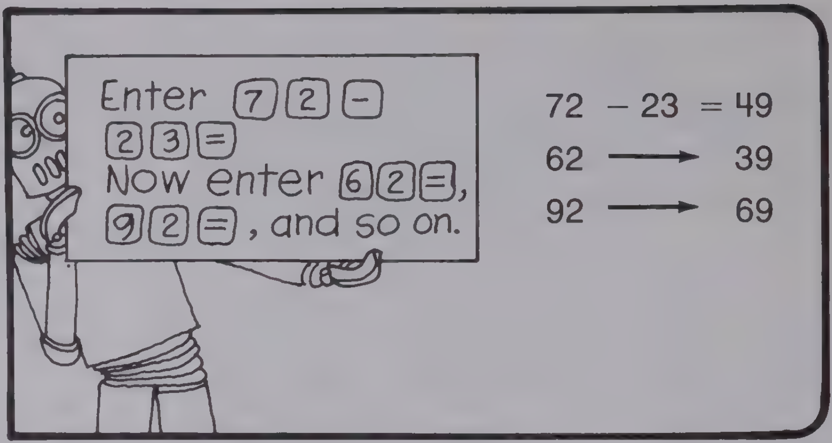
19	79	99	29	109	219	499	329	139	59
− 9	− 9	− 9	− 9	− 9	− 9	− 9	− 9	− 9	− 9

Basic Facts
Subtraction by Endings
Patterns

Answer Clues

Name ____________________


I want to subtract 23 from each of these numbers.
72
62
92



Try these. If you see a pattern, try to guess the remaining answers in that column. Then use your 🖩 to check your guesses.

Subtract 13 from each number.

Enter ③③⊖①③⊜

33 − 13 = 20

33 → ______
23 → ______
53 → ______
13 → ______
73 → ______
93 → ______
113 → ______
43 → ______

Subtract 21 from each number.

Enter ③①⊖②①⊜

31 → ______
61 → ______
81 → ______
21 → ______
51 → ______
91 → ______
121 → ______
71 → ______

Subtract 35 from each number.

Enter ⑧⑤⊖③⑤⊜

85 → ______
65 → ______
45 → ______
95 → ______
55 → ______
135 → ______
125 → ______
105 → ______

Subtract 43 from each number.

Enter ⑤⑧⊖④③⊜

58 → ______
78 → ______
98 → ______
148 → ______
138 → ______
108 → ______
68 → ______
208 → ______

Subtract 101 from each number.

Enter ①⑥⑦⊖①⓪①⊜

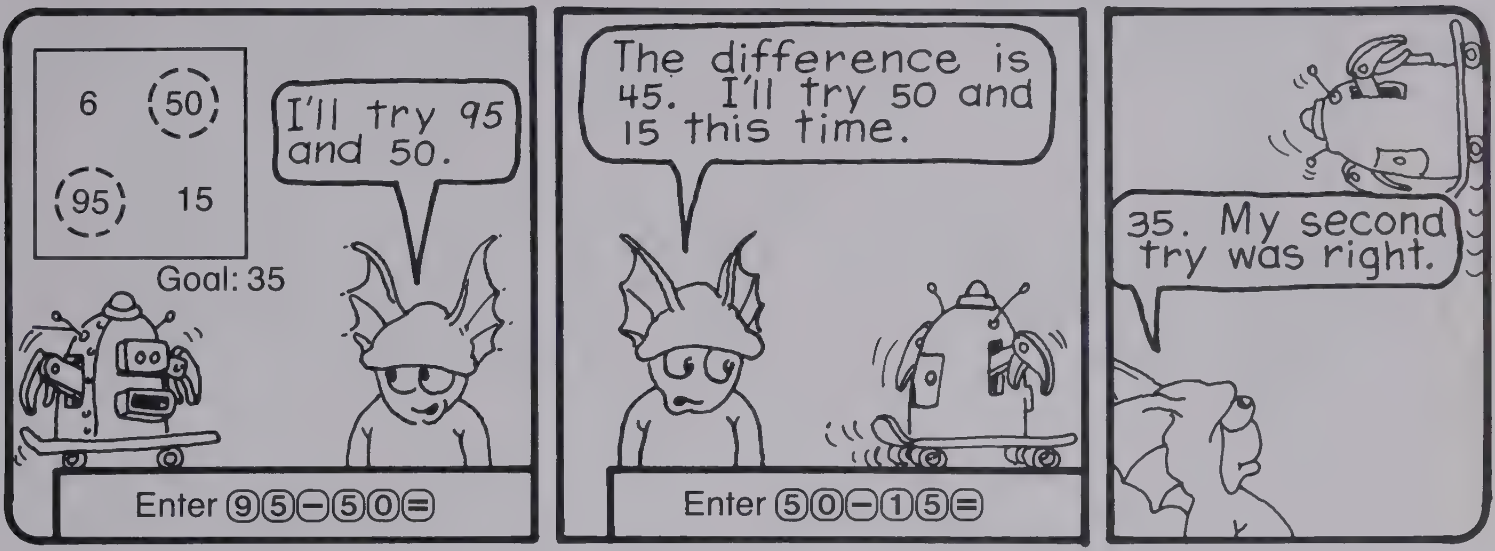
167 → ______
147 → ______
187 → ______
207 → ______
257 → ______
357 → ______
337 → ______
387 → ______

Estimation
Subtraction
Patterns

Circle Two

Name ____________________

Circle two numbers whose difference is the goal number. Use your 🖩 to check your estimate.


6 50
95 15
Goal: 35
I'll try 95 and 50.
Enter ⑨⑤⊖⑤⓪⊜
The difference is 45. I'll try 50 and 15 this time.
Enter ⑤⓪⊖①⑤⊜
35. My second try was right.

1.

63	23
9	18

Goal: 45

2.

100	26
37	94

Goal: 57

3.

120	100
53	67

Goal: 47

4.

52	37
79	66

Goal: 27

5.

38	54
27	110

Goal: 16

6.

56	77
81	72

Goal: 16

7.

18	70
14	56

Goal: 38

8.

100	28
81	120

Goal: 39

9.

100	35
45	13

Goal: 65

Estimation
Addition and Subtraction
Patterns

Pick and Check

Name ____________________

Estimate each answer below. Circle the number closest to your estimate, and then check your answer on your 🖩 .

1. 47 + 12
39
45
[✓ 59]
49

2. 23 + 45
28
[✓ 68]
22
62

3. 115 − 35
120
[✓ 80]
90
20

4. 14 + 18 =
12
24
42
[✓ 32]

5. 36 − 11
15
45
[✓ 25]
27

6. 29 + 67 =
[✓ 96]
83
23
103

7. 206 + 12 =
248
208
198
[✓ 218]

8. 998 + 3 =
101
995
1101
[✓ 1001]

9. 123 − 40
63
[✓ 83]
23
103

10. 149 + 23 =
162
176
[✓ 172]
163

Money
Addition and Subtraction
Patterns
Estimation

Cold Cash

Name ______________________

Estimate each amount in the problems below. Circle the answer closest to your estimate. Use your 🖩 to check your estimate.

1. 78¢
+ 23¢

$1.01
$1.21
$1.05
$0.91

2. 46¢
− 21¢

$.27
$.25
$.15
$.35

3. $1.49
− .46

$1.13
$0.95
$1.03
$0.93

4. $3.44
+ 2.47

$5.91
$7.81
$6.91
$5.83

5. $5.00
− 2.34

$3.76
$3.66
$2.34
$2.66

6. $10.46
+ 3.17

$13.63
$13.31
$ 7.63
$13.53

7. $120.00
+ 16.43

$116.43
$126.43
$136.43
$146.47

8. $46.98
− 6.93

$39.05
$40.05
$39.95
$40.95

Four Straight

Name ____________________ ✓

Number of Players: 2
Materials: 🖩 🖩, 8 markers each (two different colors)
Object of Game: To have 4 markers in a row in any direction

[redacted]

Game 1

46 4 15 21 8 39 73 81 106

60	34	66	27
6	69	73	85
25	8	102	35
98	13	31	11

Game 2

62 78 19 3 31 27 54 110 40

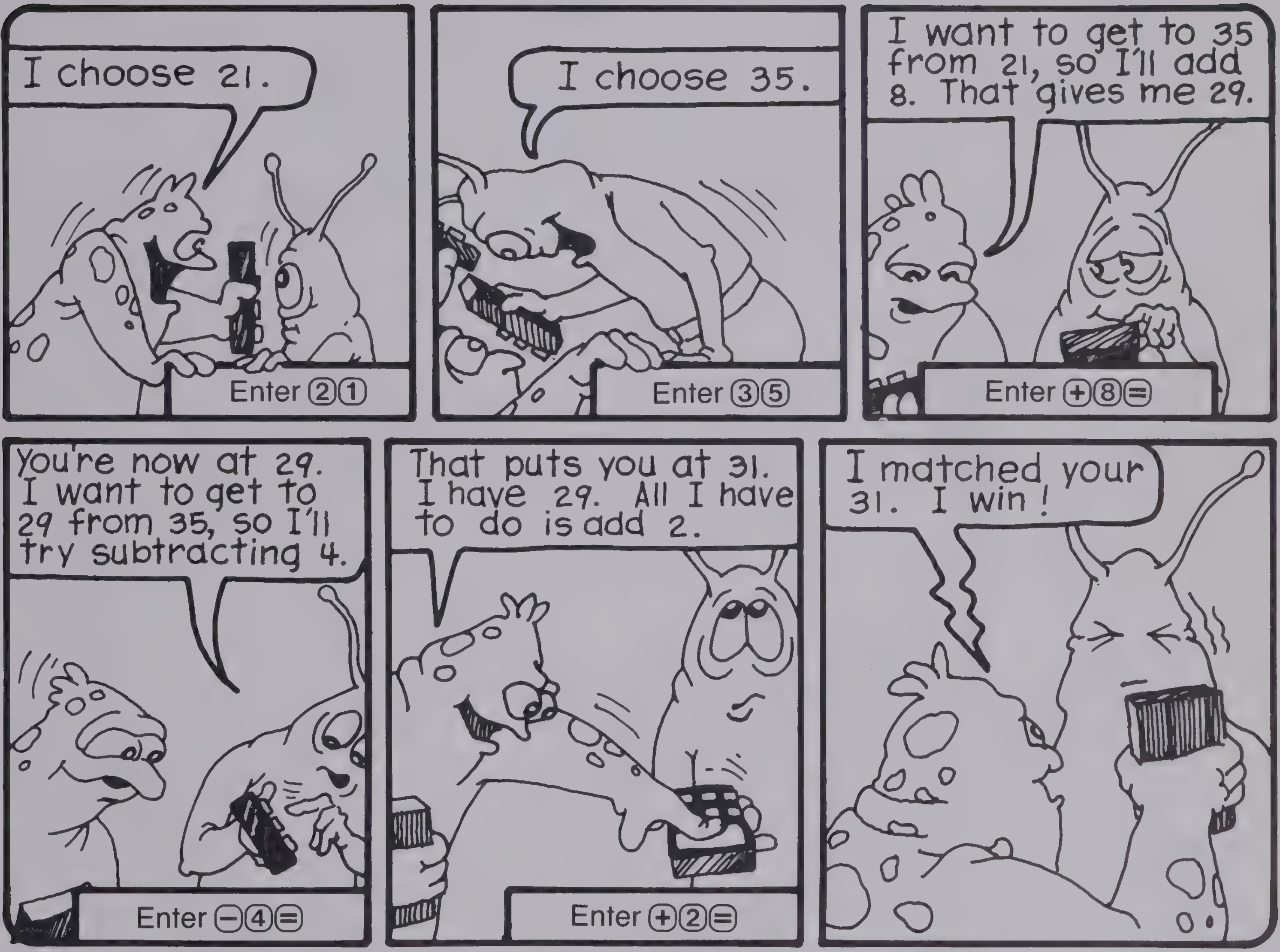
48	8	43	27
31	51	79	35
9	14	16	83
47	23	38	24

Problem Solving
Estimation
Addition and Subtraction

Match Me

Name ______________________

Number of Players: 2
Materials: 🖩 🖩
Object of Game: To match the opponent's number through addition and subtraction
Rules: Each player enters a number between 20 and 50. Players show each other their numbers.
Players take turns trying to match the other player's number by adding to or subtracting from that number.
The winner of the game is the player who makes the match.


I choose 21.
Enter ②①
I choose 35.
Enter ③⑤
I want to get to 35 from 21, so I'll add 8. That gives me 29.
Enter ⊕⑧⊜
You're now at 29. I want to get to 29 from 35, so I'll try subtracting 4.
Enter ⊖④⊜
That puts you at 31. I have 29. All I have to do is add 2.
Enter ⊕②⊜
I matched your 31. I win!

Problem Solving
Basic Facts
Numeration

Twin Digits

Name ✓ ______________________

Number of Players: 2
Materials: 🖩
Object of Game: To make a twin-digit number (a 2-digit number whose digits are the same)

Rules:

Enter in your 🖩 a starting number between 1 and 99. Record that number on the game sheet.
Your opponent must add to or subtract from your number to make a twin-digit number. For example, if you enter 27, your opponent could subtract 5 to make 22 or add 6 to make 33.
Tally each try on the game sheet.
Clear the 🖩 after each try and reenter the starting number.
Play continues until your opponent makes a twin-digit number. Record the completed twin-digit equation on the game sheet.
Now it's your turn to make a twin-digit number.
The winner of the game is the player who makes a twin-digit number in fewer tries.

27 + [✓ −] 5 = 22

Game 1

Starting Number				Twin-Digit Number	Tally of Tries
______	+ −	______	=	______	______
______	+ −	______	=	______	______

Game 2

Starting Number				Twin-Digit Number	Tally of Tries
______	+ −	______	=	______	______
______	+ −	______	=	______	______

Problem Solving
Addition and Subtraction
Estimation

Spin the Web

Name ______________________________

TO THE TEACHER
It is suggested that you explain the rules of SPIN THE WEB to your students as you play a sample game on the board or on the overhead projector.

SPIN THE WEB is a game for two players. One player is the spider, and the other player is the fly. The object of the game is for the spider to trap the fly in six moves or less.* The fly is trapped when he can make no further moves.

The players will need a calculator, a pencil, one marker, and a gamesheet.

The fly places the marker on any number on the grid, covering only one number at a time. The spider draws an X on any other number.

To start the game, the fly must move to another number. He chooses the number, then adds to or subtracts from the number he is on to reach the new number. He says the addition or subtraction problem (sentence) aloud. For example, if the fly is on 25 and wants to move to 50, he says, "I'm on 25 and I want to move to 50, so 25 plus 25 is 50." He then checks his addition using the calculator.

The spider must now choose another number and move to it in the same way, saying the addition or subtraction problem aloud. The spider draws an X on the new number and then draws a straight "web" line from X to X.

The game continues in the same way with players moving from number to number. Each time the spider moves, he draws a straight line from his new number to his previous number.

The fly may not move across any line that the spider has drawn.

All moves must be said aloud. If a player makes a mistake in calculation, he may not move, and the turn is lost.

Play continues until the fly cannot move to any other number, or until each player has had six turns.

The spider wins if he can trap the fly in six or fewer turns.

* The number of moves may be varied according to the ability and experience of your students.

1 •	2 •	3 •	4 •	5 •	6 •	7 •	8 •	9 •	10 •
11 •	12 •	13 •	14 •	15 •	16 •	17 •	18 •	19 •	20 •
21 •	22 •	23 •	24 •	25 •	26 •	27 •	28 •	29 •	30 •
31 •	32 •	33 •	34 •	35 •	36 •	37 •	38 •	39 •	40 •
41 •	42 •	43 •	44 •	45 •	46 •	47 •	48 •	49 •	50 •
51 •	52 •	53 •	54 •	55 •	56 •	57 •	58 •	59 •	60 •
61 •	62 •	63 •	64 •	65 •	66 •	67 •	68 •	69 •	70 •
71 •	72 •	73 •	74 •	75 •	76 •	77 •	78 •	79 •	80 •
81 •	82 •	83 •	84 •	85 •	86 •	87 •	88 •	89 •	90 •
91 •	92 •	93 •	94 •	95 •	96 •	97 •	98 •	99 •	100 •

Addition
Multiples of 10

Ya Got Me!

Name ____________________

Number of Players: 2
Materials: 🖩, 1 addition table per player
Object of Game: To hit all 5 of your opponent's shaded squares
Rules: Secretly shade in 5 squares on your addition table. Each shaded square must share at least one complete side with another shaded square. Do not let your opponent see which 5 squares you have shaded in.
Use your 🖩 to see who starts. Find the sum of the numbers in your birth date. For example, if you were born on April 14, 1971, you would add 4, 14, and 1971. The player whose sum is closer to 2000 starts.
The player who starts calls the first shot. A shot is made by naming aloud any addition combination on the table. As the combination is said aloud, it is entered on the 🖩. Both players record the sum in the correct square on the table.
The player not calling the shot must tell whether the shot is a hit or a miss. A player is "hit" if the sum is on one of his or her shaded squares. If the shot is a hit, the player calling the shot makes a tally in the space provided.
The players take turns calling shots until one player hits all 5 of the other player's shaded squares. The player hitting all 5 squares is the winner.

Fold up here to hide your table

- -

+	10	20	30	40	50	60	70	80	90
10									
20									
30									
40									
50									
60									
70									
80									
90									

Tally of Hits

Addition
Estimation

Sum Squares

Name ______________________

Number of Players: 2
Materials: 🖩 🖩 , 8 markers each (two different colors)
Object of Game: To have 4 markers in a row in any direction

Game 1

31
23
16
1
42
51
8
49

39	47	54	73
67	65	31	59
24	80	74	100
57	58	72	50

Game 2

13
55
47
21
31
39
65
5

60	18	34	68
112	52	70	26
104	44	86	36
76	96	94	78

Subtraction
Estimation

Difference Squares

Name ____________________

Number of Players: 2
Materials: 🖩🖩, 8 markers each (two different colors)
Object of Game: To have 4 markers in a row in any direction

[illegible]

Game 1

50
71 60 5
33
43
26
16 19

55	45	14	38
12	27	10	24
7	28	17	36
21	52	41	11

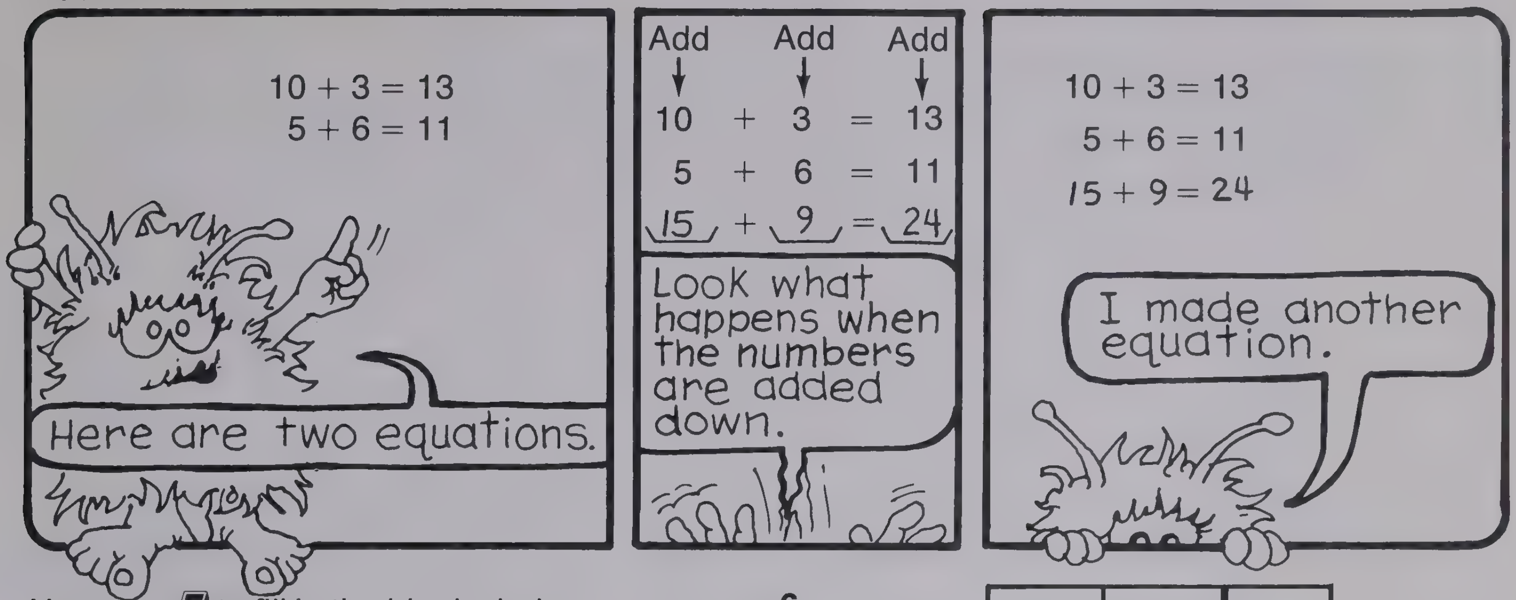
Game 2

94
53
12
43
58
48
2 7
22

41	72	20	26
21	82	10	56
15	36	46	62
31	87	51	5

Across and Down

Name ____________________



Use your calculator to fill in the blanks below.
Add across and down.

1.

47 + 86 = 133
19 + 20 = 39
___ + ___ = ___

2. Add across, then down.

10 + 7 = ___
14 + 3 = ___
___ + ___ = ___

3. Try it without operation signs.

18	16	___
19	15	___
___	___	___

4.

8	5	
2	7	

5.

12	10	
8		14
	16	

6.

	8	
4		
11		20

7.

20		33
18	12	
38		

8.

30		40
	50	
		100

9.

21		43
23		
	46	

10. Make one of your own.

Problem Solving
Addition and Subtraction

Magic Grid

Name ____________________

Use your 🖩 to fill in the blanks below. Subtract across and down.

Subtract down
↓ ↓ ↓
→ 24 − 15 = 9
Subtract across → 11 − 6 = 5
→ 13 − 9 = 4

1.
10 − 6 = ____
8 − 5 = ____
____ − ____ = ____

2.

49	19	
32	15	

3.

18	8	
14	6	

4.

15	6	
12	4	

5.

24	13	
15		8

6.

14		7
	3	
		5

7.

18		9
12		3

8.

21	15	
	7	
14		

9.

20	3	
4	2	
		15

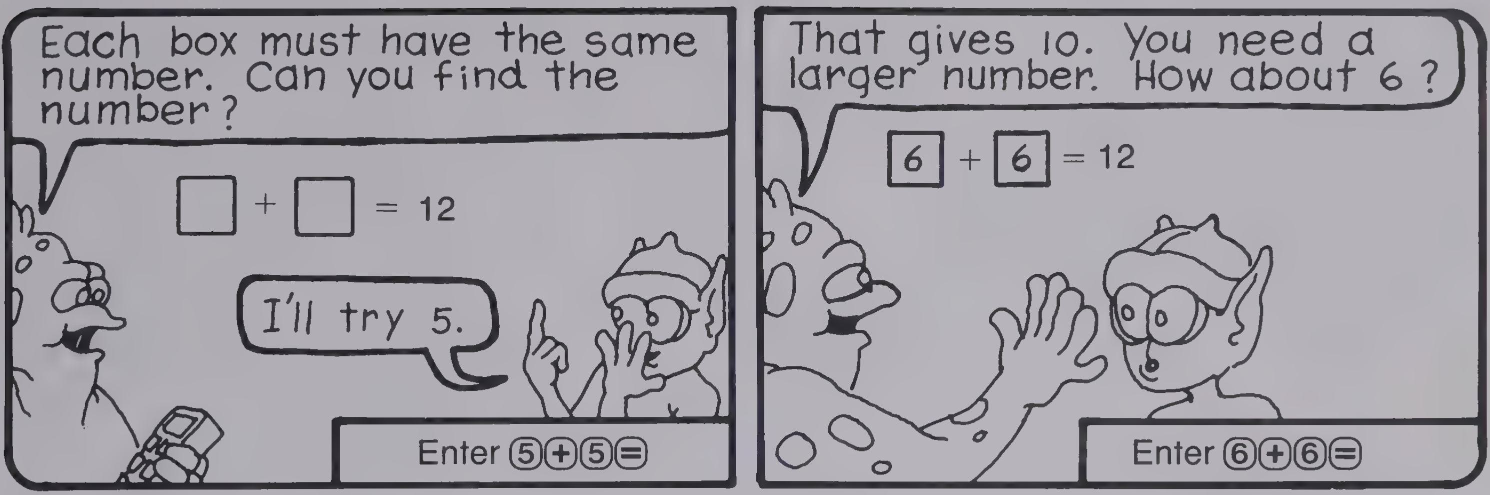
Try to make one of your own.

10.

Problem Solving
Addition
Estimation

Doubles

Name ____________________


Each box must have the same number. Can you find the number?
☐ + ☐ = 12
I'll try 5.
Enter ⑤⊕⑤⊜
That gives 10. You need a larger number. How about 6?
6 + 6 = 12
Enter ⑥⊕⑥⊜

See if you can find the number that completes each of these equations. Use your 🖩 to check.

1. ☐ + ☐ = 16

2. ☐ + ☐ = 26

3. ☐ + ☐ = 48

4. ☐ + ☐ = 28

5. ☐ + ☐ = 64

6. ☐ + ☐ = 30

7. ☐ + ☐ = 100

8. ☐ + ☐ = 102

9. ☐ + ☐ = 200

10. ☐ + ☐ = 264

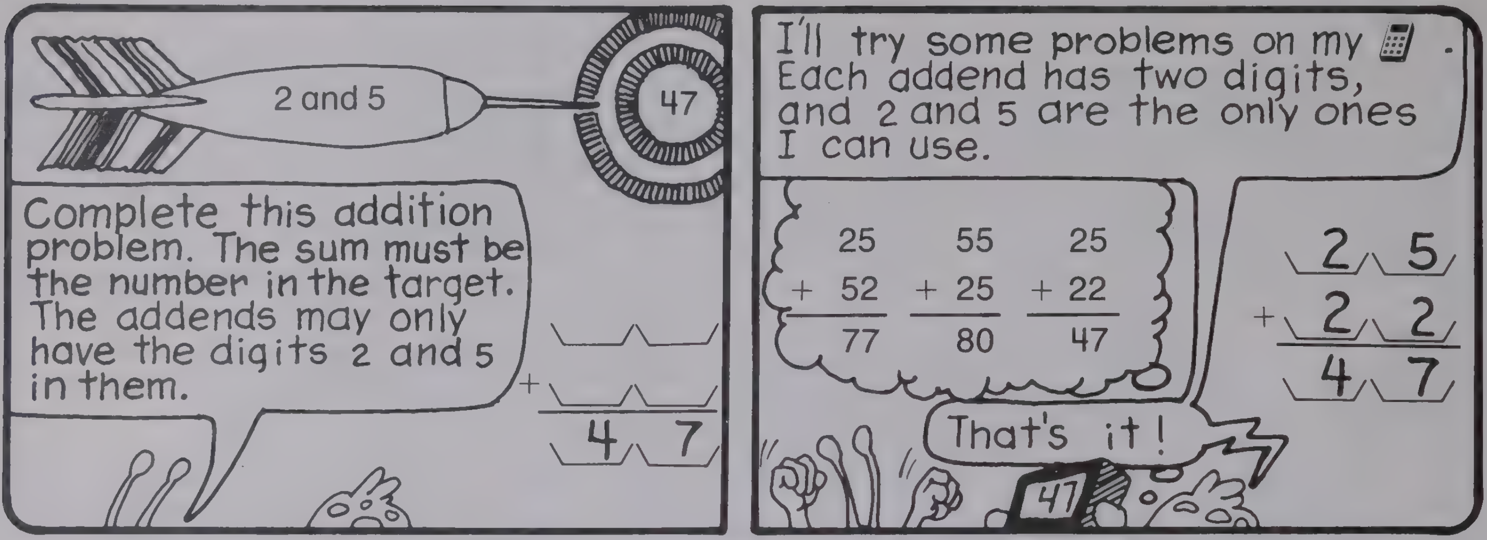
11. ☐ + ☐ = 60

12. ☐ + ☐ = 160

Problem Solving
Basic Facts

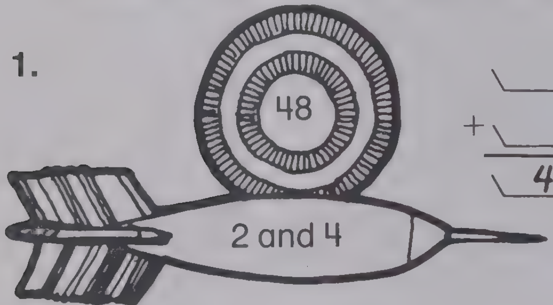
Hit the Target

Name ______________________


2 and 5
47
Complete this addition problem. The sum must be the number in the target. The addends may only have the digits 2 and 5 in them.
___ ___
+ ___ ___
4 7
I'll try some problems on my 🖩. Each addend has two digits, and 2 and 5 are the only ones I can use.
25 + 52 = 77
55 + 25 = 80
25 + 22 = 47
2 5
+ 2 2
4 7
That's it!
47

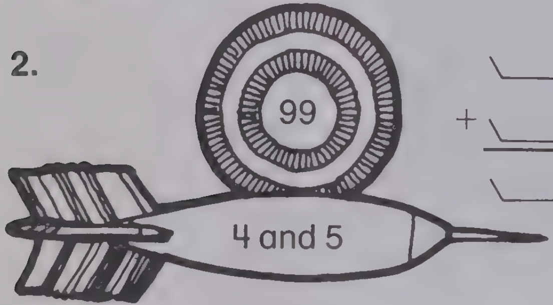
Try these problems. Use your 🖩 to test your choices.
Remember, the numbers on the dart are the only ones you can use to hit the target.

1.



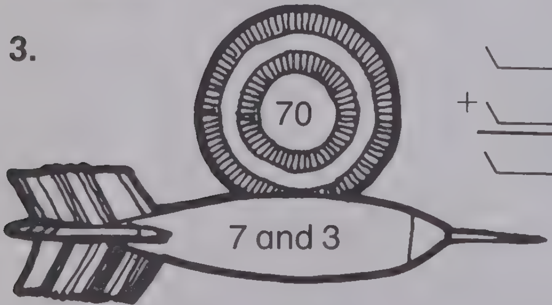
___ ___
+ ___ ___
4 8

2.



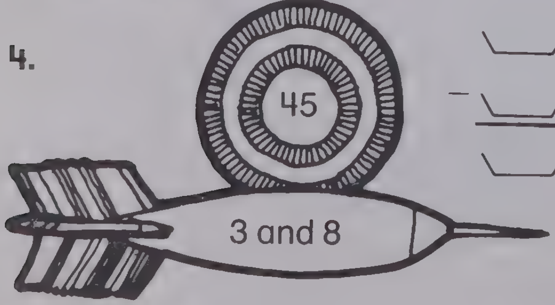
___ ___
+ ___ ___
___ ___

3.



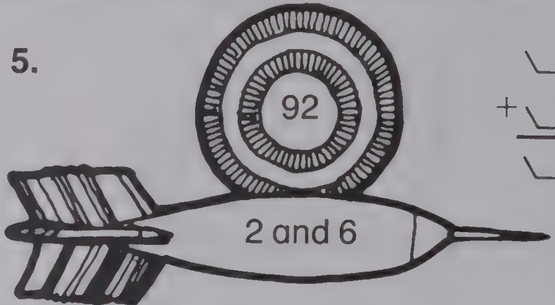
___ ___
+ ___ ___
___ ___

4.



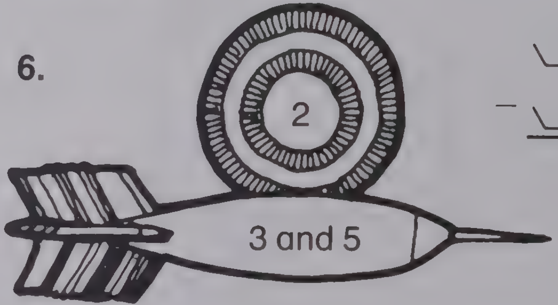
___ ___
− ___ ___
___ ___

5.



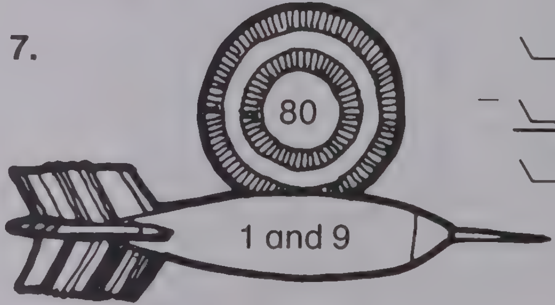
___ ___
+ ___ ___
___ ___

6.



___ ___
− ___ ___
___

7.



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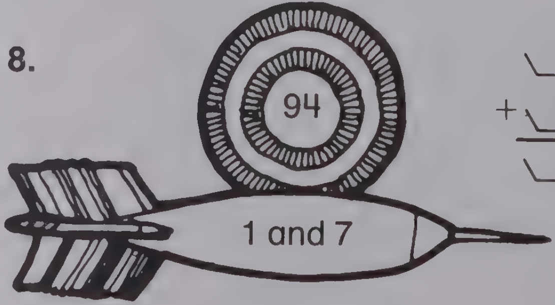

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Problem Solving
Basic Facts

Target Practice

Name ______________________

Here's some more target practice.

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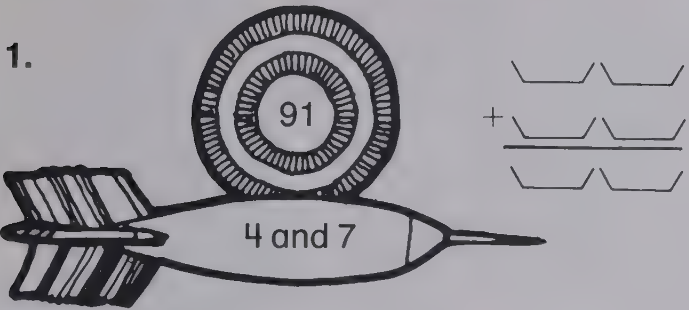

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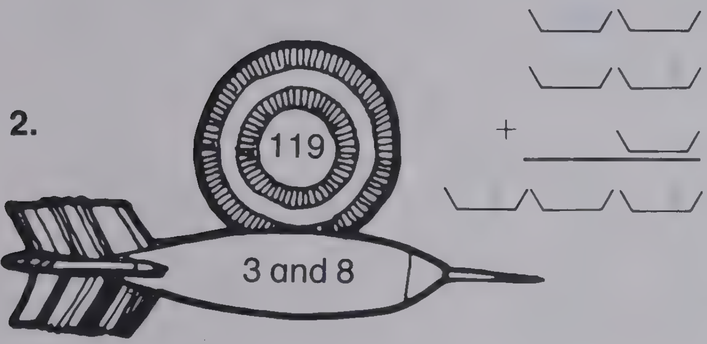

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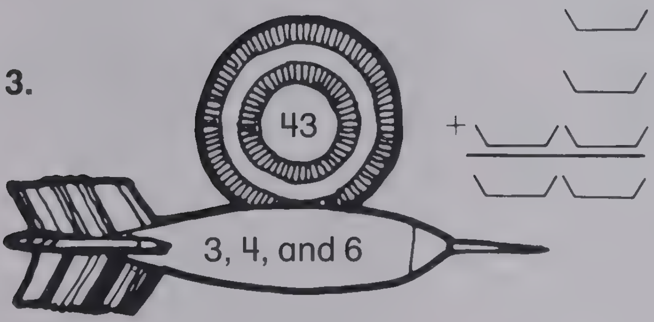

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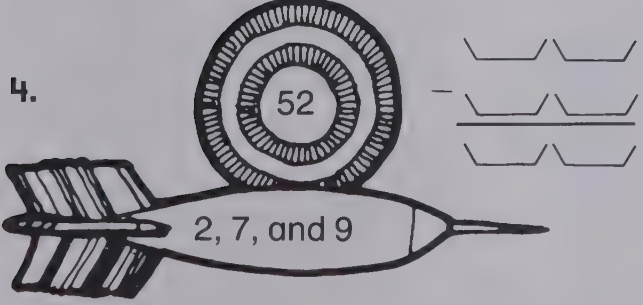

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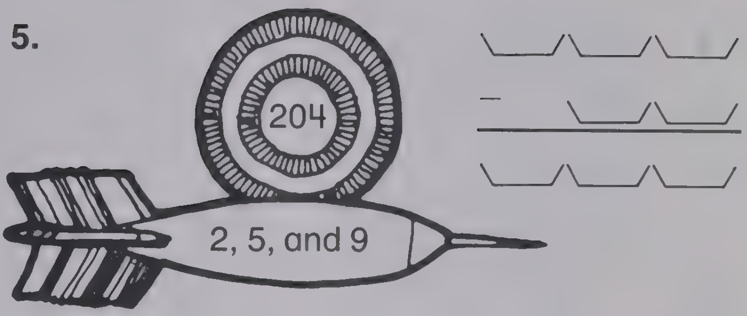

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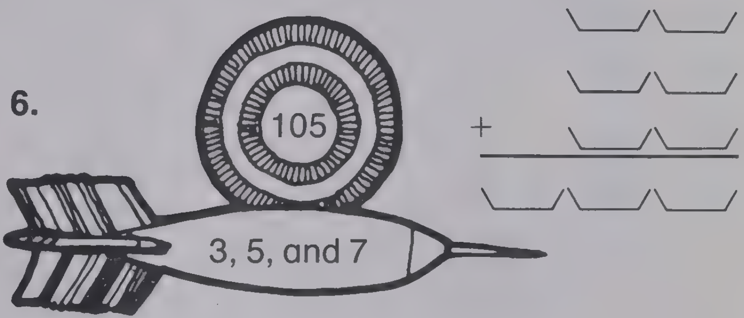

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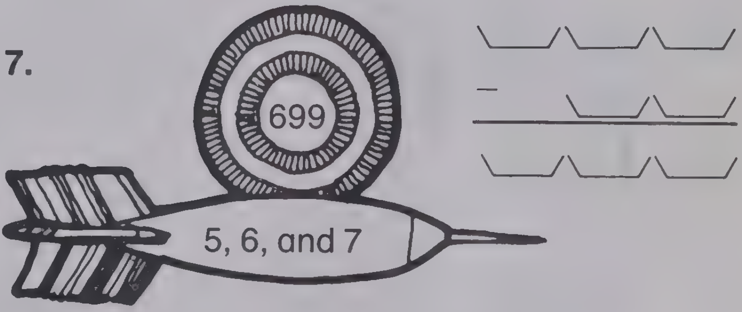

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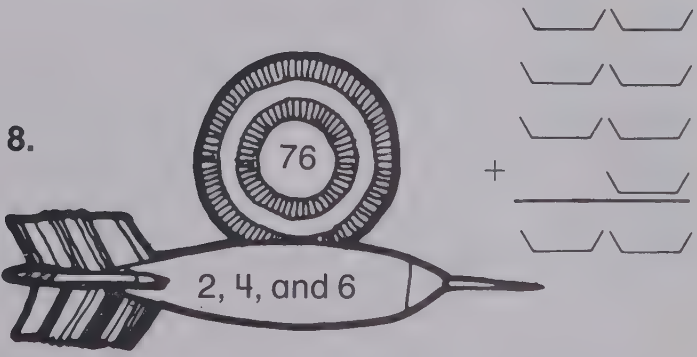
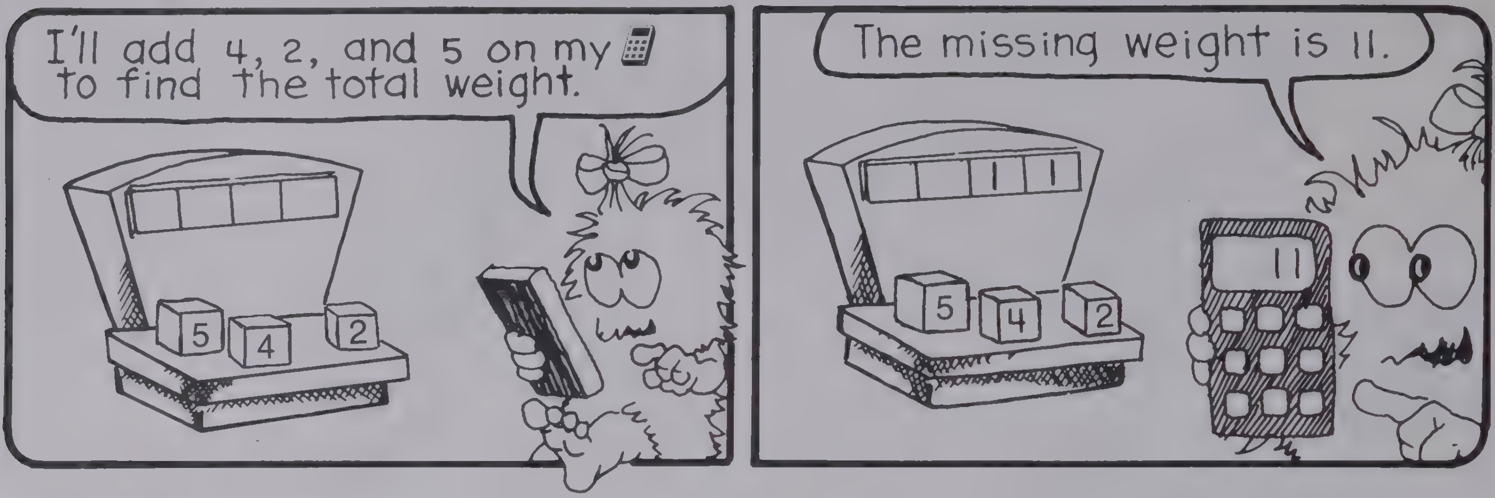


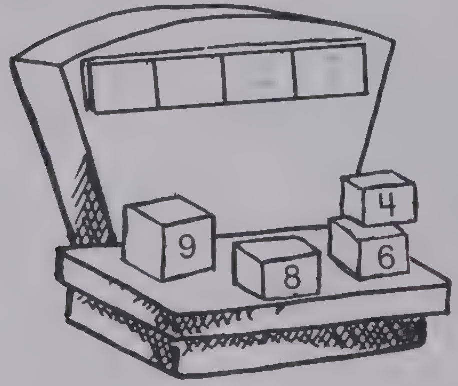
Weighing the Facts

Name ______________________

Use your calculator to find the missing weights.


I'll add 4, 2, and 5 on my calculator to find the total weight.
5
4
2
The missing weight is 11.
1 1
11
5
4
2

1.



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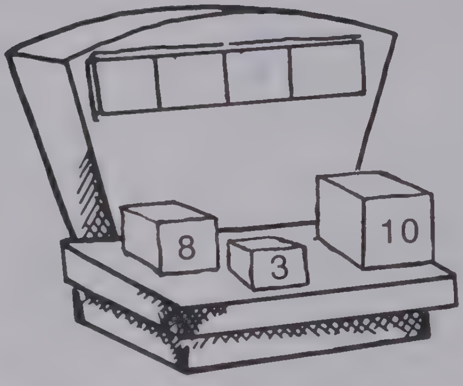

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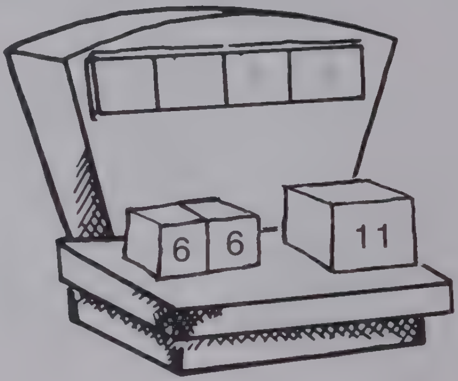
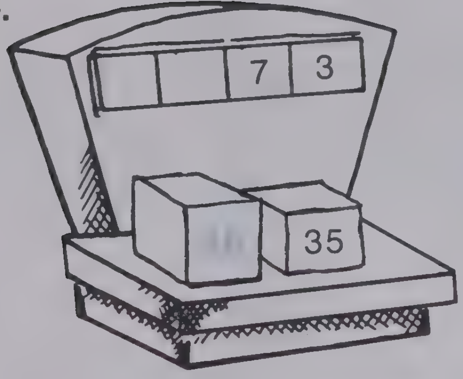


These boxes are the same size, so the same number goes in each.

4.



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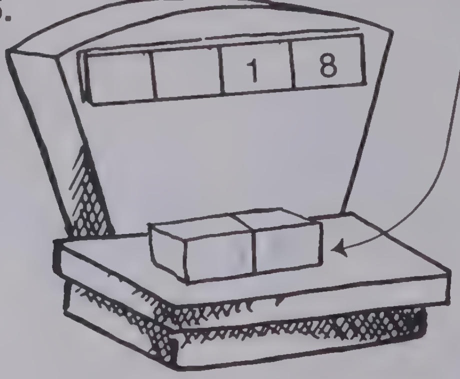

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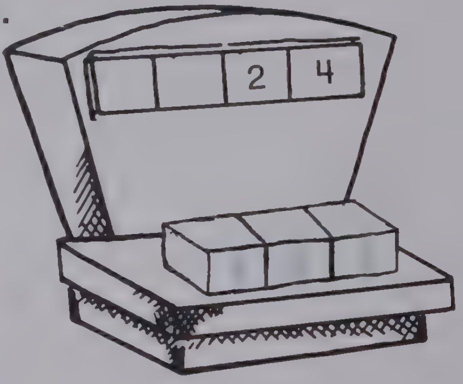

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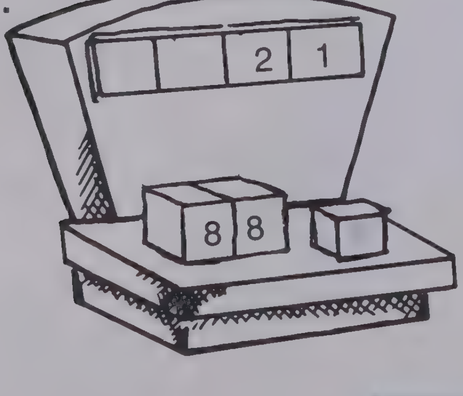

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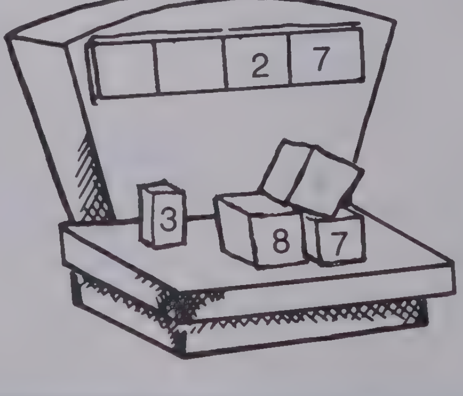

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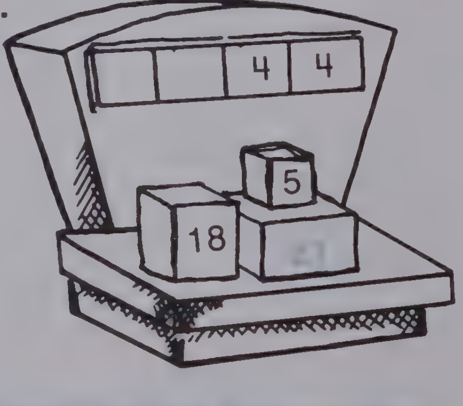
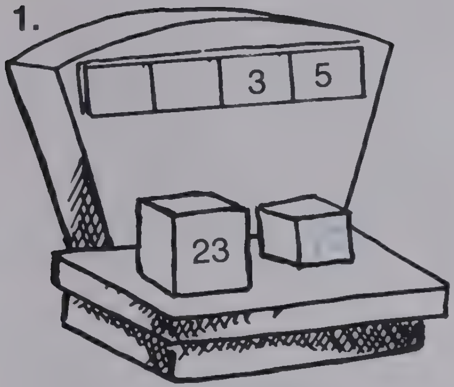


Scaling Facts

Name ______________________

Use your 🖩 to find the missing weights below.

1.



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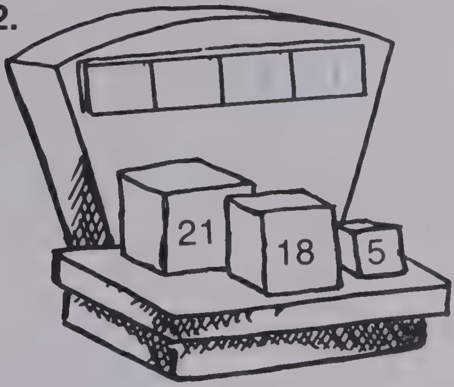

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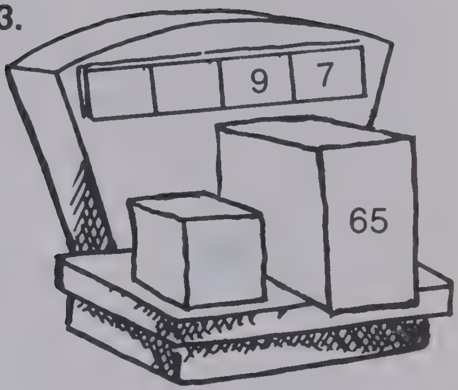

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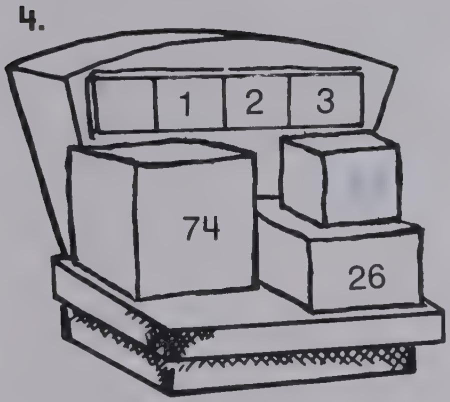

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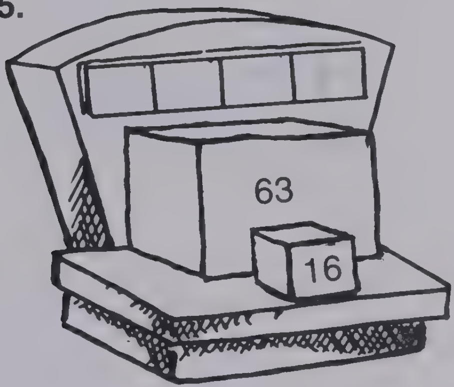

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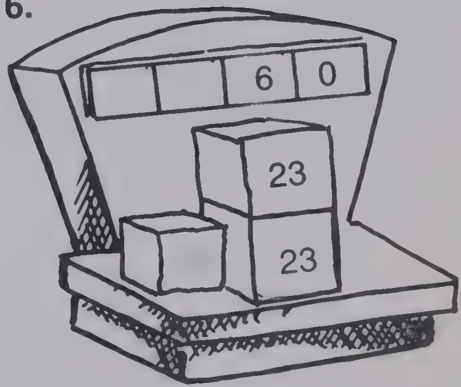

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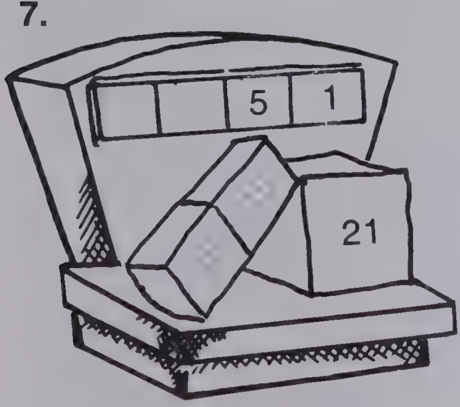

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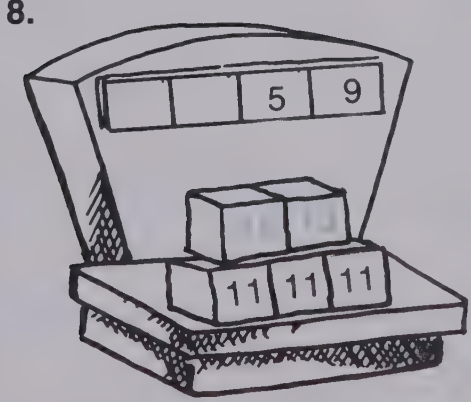

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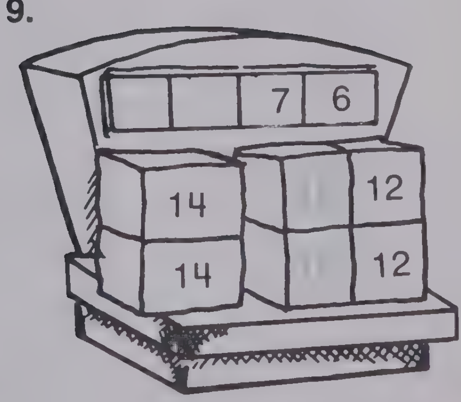

Problem Solving
Estimation

Facts Scale

Name ______________________

Use your 🖩 to find the missing weights.

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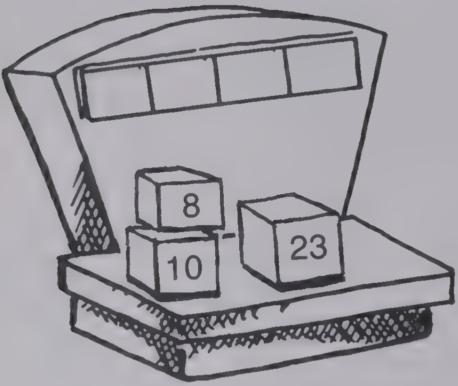

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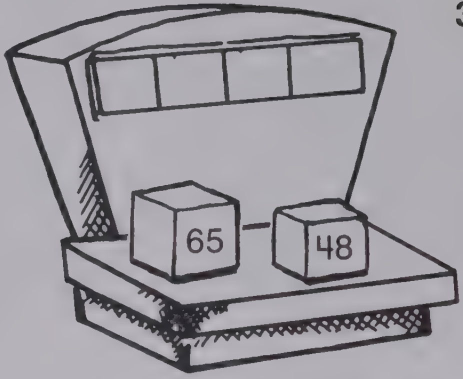

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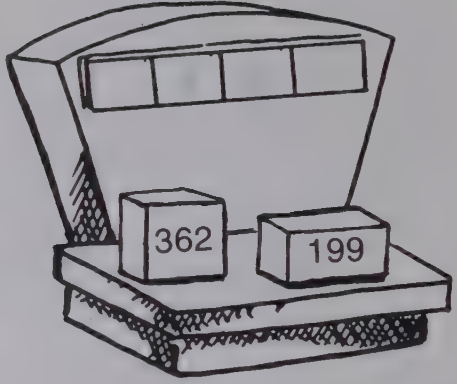

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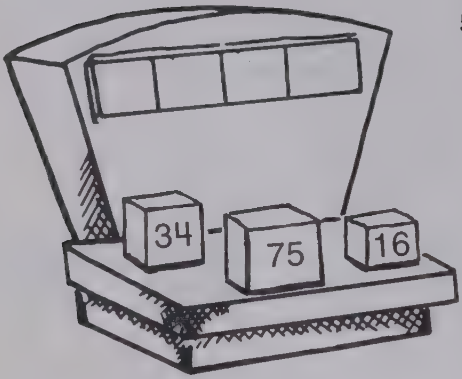

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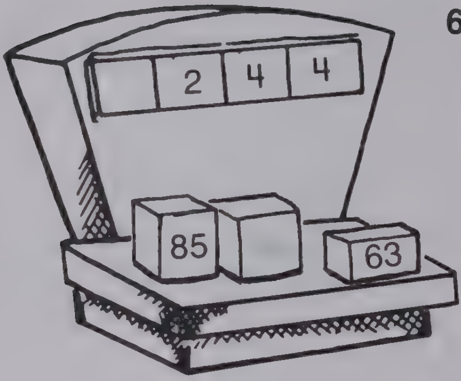

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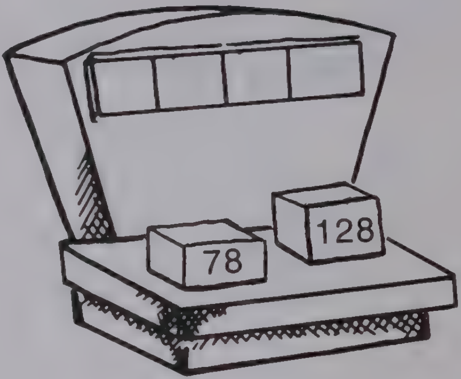

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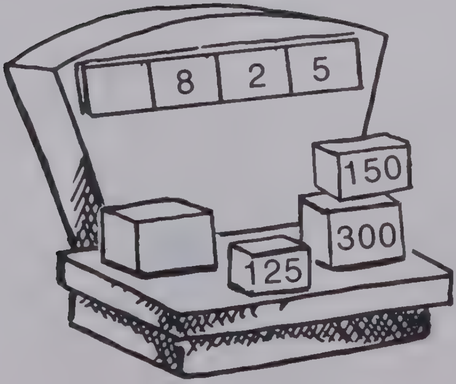

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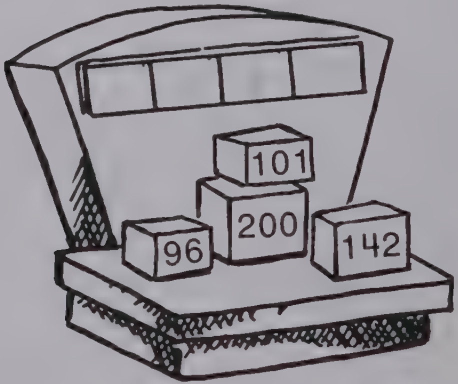
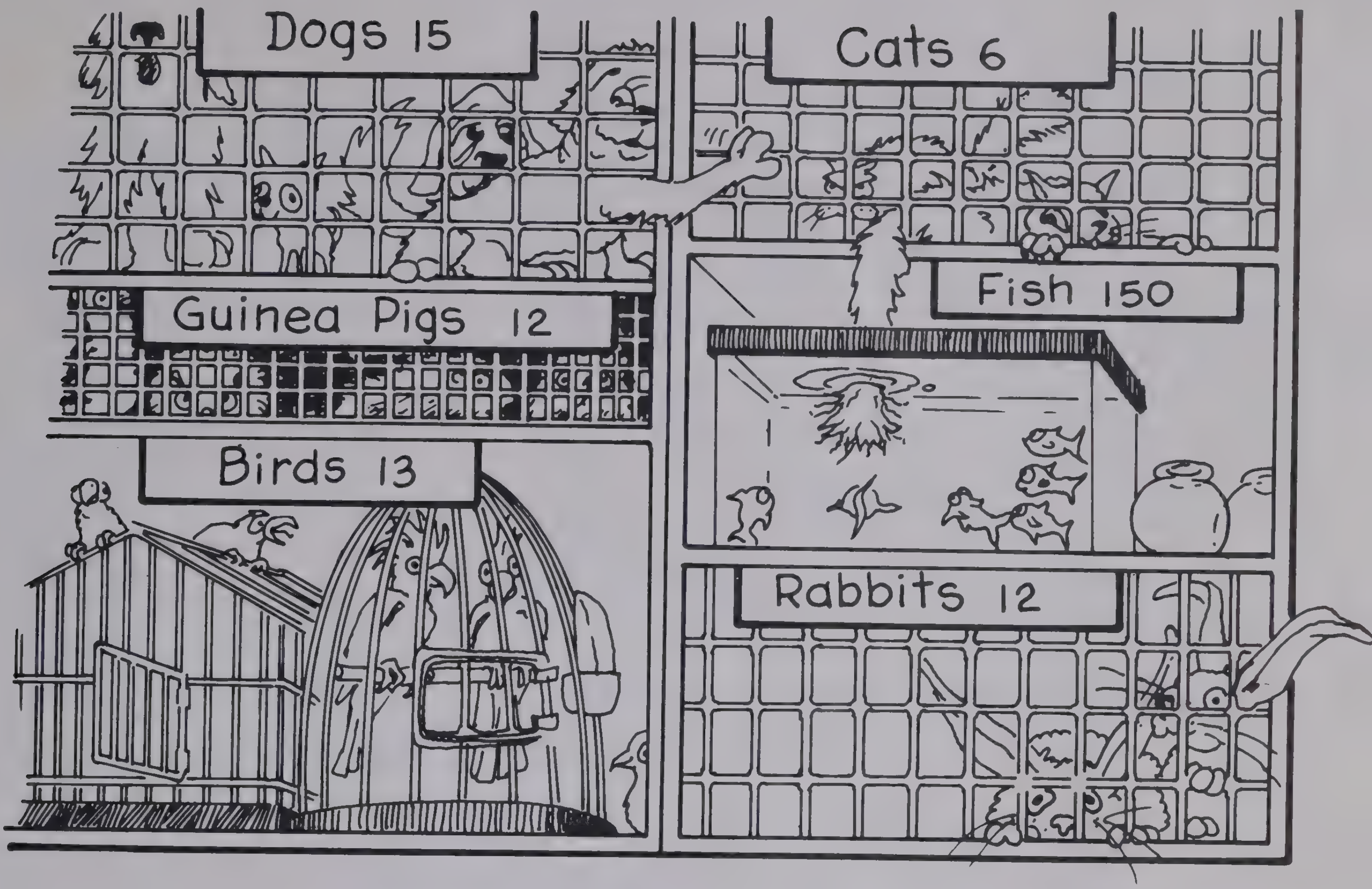


The Pet Shop

Name ______________________



1. How many animals are there in the pet store? ______
2. How many guinea pigs and rabbits are there altogether? ______
3. How many birds and fish are there altogether? ______
4. How many more dogs than cats are there? ______
5. One week the pet shop sold 6 dogs, 2 cats, 4 guinea pigs, 78 fish, 2 birds, and 3 rabbits. How many pets were sold in all? ______
6. How many pets were not sold? ______
7. How many fish were left? ______
8. How many dogs were left? ______
9. There were 30 fishbowls for sale. Of those, 13 were sold. How many fishbowls were left? ______
10. Six ant farms were also sold. Each ant farm held 24 ants. How many ants were sold? ______

Fund Raiser

Name ______________ ✓

The Little League spent two weeks selling jars of popcorn.

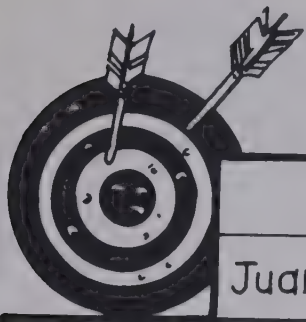
Team	Number of Players	Number of Jars Sold		Total
		First Week	Second Week	
Astros	12	75	121	
Cards	11	98	64	
Giants	12	122	53	
Royals	12	99	79	
Cubs	11	87	87	

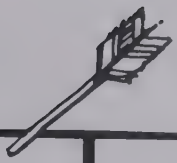
Use your 🖩 to answer these questions.

1. How many players were on the teams altogether? ______
2. How many jars were sold the first week? ______
3. How many jars were sold the second week? ______
4. How many more jars were sold the first week than were sold the second week? ______
5. How many jars were sold altogether? ______
6. The Giants sold how many more jars the first week than the second week? ______
7. The Astros sold how many more jars the second week than the first week? ______
8. Find the total number of jars that each team sold.
   A prize was given to the team selling the most jars.
   Which team won? ______
9. How many jars did the Astros sell? ______
10. Which team sold the least jars? ______
11. How many jars did the Cards sell? ______

Bull's Eye

Name ______________________





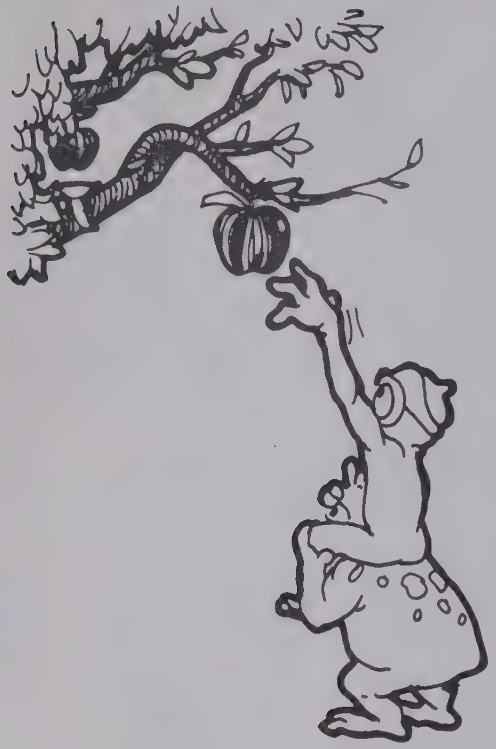
	Team A					Team B				
	Juan	Mary	Todd	Jan	Jeff	Linda	Bill	Chris	Terry	Rosa
First Arrow	40	50	40	30	10	10	40	40	50	30
Second Arrow	30	10	40	50	30	20	40	20	30	50
Third Arrow	50	10	30	40	50	50	10	50	40	20
Total										

Use your 🖩 to answer the questions below.

1. How many points did Team A score? Total the points for each player, then total the points for the team. ______
2. How many points did Team B score? Total the points for each player, then total the points for the team. ______
3. Who would have won if Juan, Linda, Jeff, and Chris had not played? ______
4. Find the scores of the three best players on Team A. What is the sum of those scores? ______
5. Find the scores of the three best players on Team B. What is the sum of those scores? ______
6. How many points did Team A score on the first arrow? ______
7. How many points did Team B score on the first arrow? ______
8. Which team was ahead after all players had shot their second arrows? ______

The Orchard

Name ____________________



Pickers	Boxes of Fruit Picked			
	Apples	Pears	Cherries	Peaches
Barb	12	7	9	14
Bob	10	5	11	11
Dick	6	15	9	10
Kelly	17	4	6	8

Use your 🖩 to answer the questions below.

1. How many boxes of fruit were picked by each picker?

   ____ Barb ____ Bob ____ Dick ____ Kelly

2. How many boxes of each fruit were picked?

   ____ Apples ____ Pears ____ Cherries ____ Peaches

3. Together, Barb and Dick picked how many boxes of each fruit?

   ____ Apples ____ Pears ____ Cherries ____ Peaches

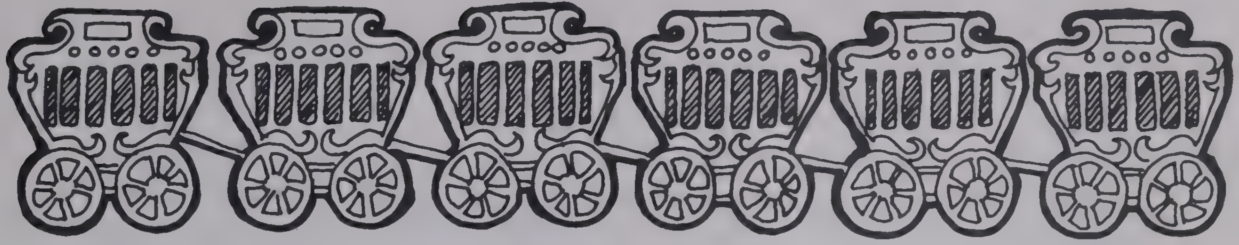
4. Who picked more boxes of fruit?

   Bob and Barb Dick and Kelly

5. Barb picked how many more boxes of fruit than Kelly? ____

Center Ring

Name ____________________



Use your 🖩 to answer the questions below.

1. How many animals are there in the circus train? ______

	Tigers	Lions	Elephants	Ponies	Dogs	Monkeys
Act 1	16	18	0	0	0	0
Act 2	0	0	12	15	0	0
Act 3	0	0	10	0	20	6
Act 4	0	0	0	20	0	20
Act 5	15	24	18	16	18	14

2. How many animals are in

Act 1? ______
Act 2? ______
Act 3? ______
Act 4? ______
Act 5? ______

3. Which act has the fewest animals? ____________

4. Which act has the most animals? ____________

5. How many more animals are there in Act 5 than in Act 3? ______

Center Ring (continued)

Name ____________________

The circus gave four shows.

	Number of Tickets Sold	
	Adults	Children
Show 1	432	685
Show 2	597	869
Show 3	346	972
Show 4	641	884

6. How many tickets were sold for each show?

Show 1 ________
Show 2 ________
Show 3 ________
Show 4 ________

7. How many tickets were sold in all? ________

8. How many adult's tickets were sold in all? ________

9. How many child's tickets were sold in all? ________

10. How many more child's tickets than adult's tickets were sold? ________

11. An adult's ticket costs $3.50 and a child's ticket costs $2.25. How much would it cost for 2 adults and 3 children to attend? ________

Real World Facts

Name ✓

Use your 🖩 to find each difference below.

1. The population of the United States in 1770 was 2,205,000.
The population in 1870 was 38,558,371.
In 1970 the population was 203,235,298.
How many more people were there in 1870 than in 1770? 36,353,371

2. Earth is about 25,730,000 miles from the Venus.
Venus is about 67,270,000 miles from the Sun.
What is the distance between Earth and the Sun? 93,000,000 miles

3. The diameter of Earth is 12,756 km.
The Sun's diameter is 1,379,925 km greater than Earth's.
What is the diameter of the Sun? 1,392,681 km

4. The length of the Nile River is 6690 km.
The length of the Amazon River is 6570 km.
How much longer is the Nile River? 120 km

5. The height of Mount Everest is 29,028 ft.
The height of Kilimanjaro is 19,340 ft.
Mount McKinley is 20,320 ft high.
How much higher is Mount Everest than Mount McKinley? 8,708 ft

6. In 1975 there were 13,564,000 licensed drivers in California; there were 309,940 licensed drivers in Vermont.
How many licensed drivers were there altogether in these two states? 13,873,940

7. In the 1976 presidential election 81,551,421 people voted.
In the 1960 election 68,838,219 people voted.
How many more people voted in 1976? 12,713,202

8. There were 24,250 cars sold in the United States in 1905.
In 1940 3,717,385 cars were sold.
In 1975 the total number of cars sold was 6,712,852.
How many more cars were sold in 1975 than in 1905? 6,688,602

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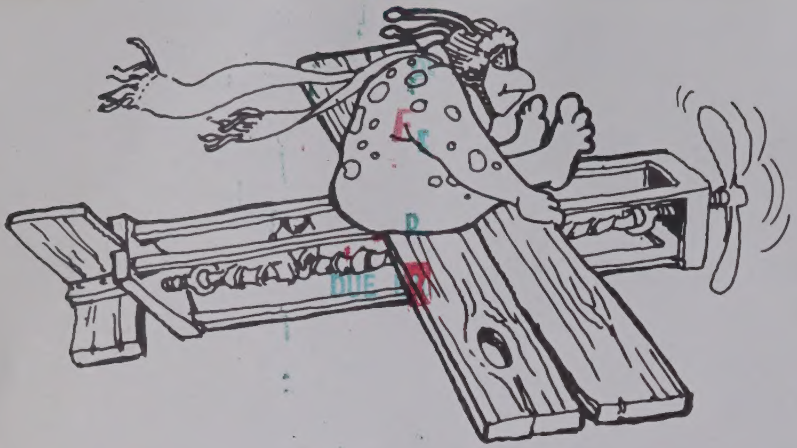

31

Date	From	To	Distance
Sept. 1	San Francisco	New York	4138 km
Sept. 2	New York	London	5582 km
Sept. 6	London	Bangkok	9546 km
Sept. 10	Bangkok	Tokyo	4610 km
Sept. 15	Tokyo	San Francisco	8286 km

RETI

Use your 🖩 to answer the questions below.

1. What is the distance from San Francisco to London by way of New York?
9720 km

2. How much farther is it from New York to London than from San Francisco to New York?
1444 km

3. How much farther is it from London to Bangkok than from Bangkok to Tokyo?
4936 km

4. What is the distance from San Francisco to Bangkok by way of New York and London?
19,266 km

5. What is the distance from San Francisco to Tokyo by way of New York, London, and Bangkok?
23,876 km

6. What is the total distance around the world if you travel from San Francisco to New York, London, Bangkok, Tokyo, and back to San Francisco?
32,162 km

7. How far is it from Tokyo to New York by way of San Francisco?
12,424 km

8. How far is it from Bangkok to San Francisco by way of Tokyo?
12,896 km

You may wish to assist the students with these exercises. A globe or map of the world would be useful as you discuss the concept of going around the world.

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